DEPARTMENT OF AGRICULTURE
FOREST SERVICE
REGION 9
ALLEGHENY NATIONAL FOREST

Timberdoodle Timber Sale

FR 305	**Lavin Run**	**1.1 Mile Reconst. – Maintenance – Level D**
FR 305A	**Lavin Run A**	**0.7 Mile Reconst. – Maintenance – Level D**
FR 305C	**Lavin Run C**	**0.2 Mile Reconst. – Maintenance – Level D**
FR 307	**Irishtown**	**0.6 Mile Reconst. – Maintenance – Level D**
FR 311	**Lewis Run**	**2.2 Mile Reconst. – Maintenance – Level D**
FR 464	**Scott**	**0.3 Mile Reconst. – Maintenance - Level D**
FR 464A	**Scott A**	**0.3 Mile Reconst. – Maintenance – Level D**
		0.9 Mile Const. Existing Corridor – Level D
FR 477	**Little Buck Lick**	**1.8 Mile Reconst.- Maintenance – Level C**
FR 477C	**Little Buck Lick C**	**0.7 Mile Const. Existing Corridor -Level D**

Bradford Ranger District
McKean County
Pennsylvania

The location and design elements of this facility have been correlated with the plans, policies and constraints of the approved Upper Kinzua and Lewis Run Environmental Assessments.

Plans are to be used with "Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects FP-03 with Special Project Specifications thereto included in this contract.

Prepared By:

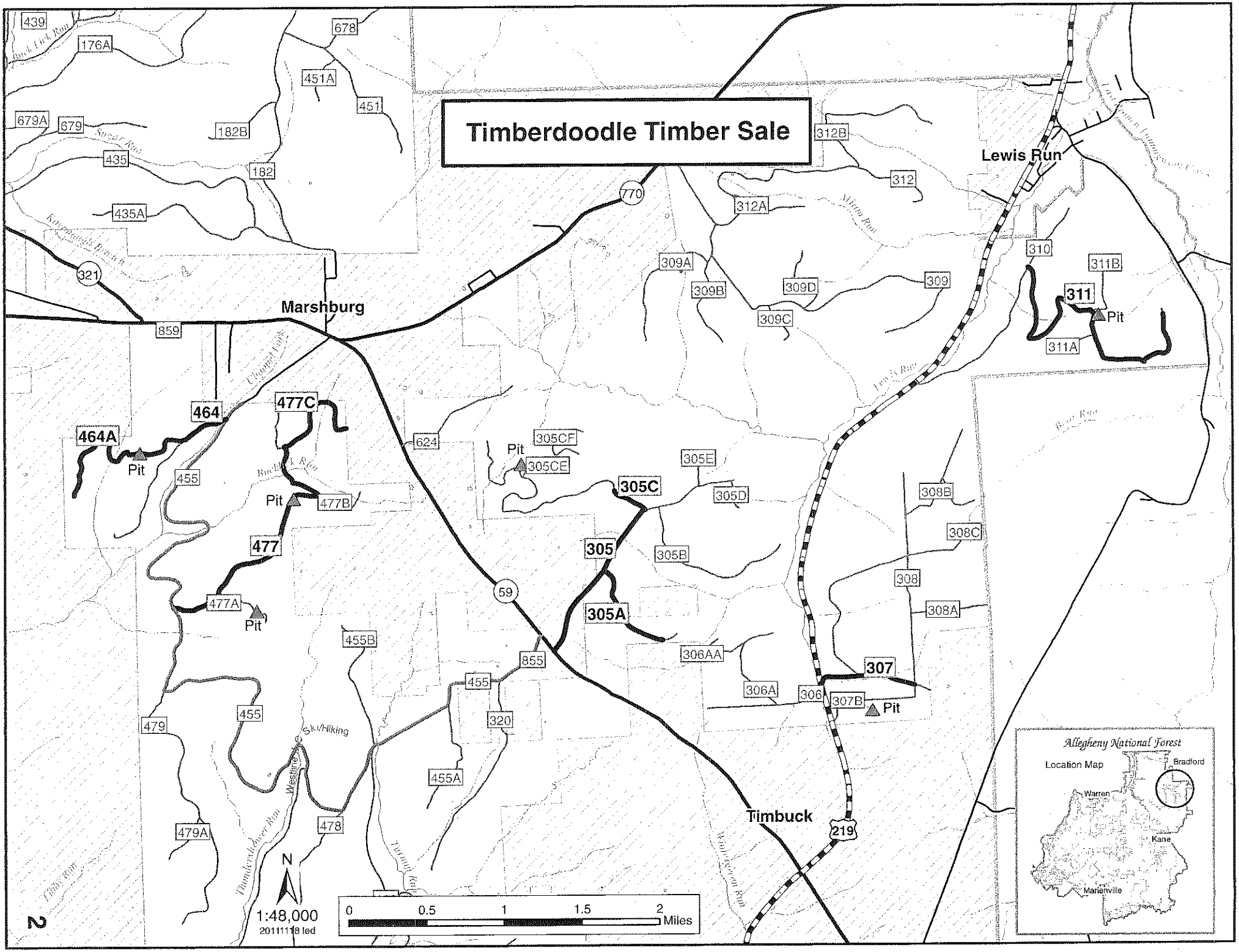
Henry D. Hess

Approved By:

11/22/11
District Ranger **Date**

11-29-2011
Forest Engineer **Date**

11-29-2011
Forest Supervisor **Date**


Timberdoodle Timber Sale
Lewis Run
Marshburg
Timbuck
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176A
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451A
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Miles
Allegheny National Forest
Location Map
Bradford
Warren
Kane
Marienville
2

SCHEDULE OF ITEMS

FR 305

ITEM	DESCRIPTION	UNIT	QTY
15101	Mobilization	All	1
20301	Removal of culverts	Each	1
23050	Brushing	Mile	1.1
30103	Aggregate base, grading pit run, compaction method A	Cubic Yard	12
30115	Aggregate surface course, grading 1" minus, compaction method A	Ton	46
30326	Road reconditioning	Mile	1.1
60263	18 inch aluminized steel, type 2, corrugated steel pipe, 0.064 inch thickness, method A	Foot	30
62503	Seeding, hydraulic or dry method	All	1

FR 305A

ITEM	DESCRIPTION	UNIT	QTY
15101	Mobilization	All	1
23050	Brushing	Mile	0.7
30103	Aggregate base, grading pit run, compaction method A	Cubic Yard	458
30326	Road reconditioning	Mile	0.7
60263	18 inch aluminized steel, type 2, corrugated steel pipe, 0.064 inch thickness, method A	Foot	200
62503	Seeding, hydraulic or dry method	All	1
65101	Pit and quarry development	Each	1

FR 305C

ITEM	DESCRIPTION	UNIT	QTY
15101	Mobilization	All	1
20301	Removal of culverts	Each	2
23050	Brushing	Mile	0.2
30103	Aggregate base, grading pit run, compaction method A	Cubic Yard	102
30326	Road reconditioning	Mile	0.2
60263	12 inch steel casing	Foot	40
60263	18 inch aluminized steel, type 2, corrugated steel pipe, 0.064 inch thickness, method A	Foot	74
62503	Seeding, hydraulic or dry method	All	1

FR 307

ITEM	DESCRIPTION	UNIT	QTY
15101	Mobilization	All	1
20301	Removal of culverts	Each	1
23050	Brushing	Mile	0.6
25102	Placed riprap, class R-5	Ton	23
30103	Aggregate base, grading pit run, compaction method A	Cubic Yard	60
30115	Aggregate surface course, type 1" minus, compaction method A	Ton	46
30326	Road reconditioning	Mile	0.6
60264	66 inch span, 51 inch rise aluminized steel, type 2, corrugated steel pipe arch, 0.138 inch thickness, method B	Foot	30
62503	Seeding, hydraulic or dry method	All	1

FR 311

ITEM	DESCRIPTION	UNIT	QTY
15101	Mobilization	All	1
23050	Brushing	Mile	2.2
30103	Aggregate base, grading pit run, compaction method A	Cubic Yard	120
30326	Road reconditioning	Mile	2.2
60263	18 inch aluminized steel, type 2, corrugated steel pipe, 0.064 inch thickness, method A	Foot	156
62503	Seeding, hydraulic or dry method	All	1
65101	Pit and quarry development	Each	1

FR 464

ITEM	DESCRIPTION	UNIT	QTY
15101	Mobilization	All	1
20301	Removal of culverts	Each	2
23050	Brushing	Mile	0.3
30103	Aggregate base, grading pit run, compaction method B	Cubic Yard	120
30115	Aggregate surface course, grading 1" minus, compaction method B	Ton	230
30326	Road reconditioning	Mile	0.3
60264	73 inch span, 55 inch rise aluminized steel, type 2, corrugated steel pipe arch, 0.138 inch thickness, method B	Foot	40
62503	Seeding, hydraulic or dry method	All	1
65101	Pit and quarry development	Each	1

FR 464A

ITEM	DESCRIPTION	UNIT	QTY
15101	Mobilization	All	1
20301	Removal of culverts	Each	1
23050	Brushing	Mile	1.2
30103	Aggregate base, grading pit run, compaction method B	Cubic Yard	166
30115	Aggregate surface course, grading 1" minus, compaction method B	Ton	161
30326	Road reconditioning	Mile	1.2
60263	18 inch aluminized steel, type 2, corrugated steel pipe, 0.064 inch	Foot	130
60264	95 inch span, 67 inch rise aluminized steel, type 2, corrugated steel pipe arch, 0.138 inch thickness, method B	Foot	42
62501	Seeding, hydraulic or dry method (Lump Sum)	All	1
65101	Pit and quarry development	Each	1

FR 477

ITEM	DESCRIPTION	UNIT	QTY
15101	Mobilization	All	1
20301	Removal of culverts	Each	11
23050	Brushing	Mile	1.8
30103	Aggregate base, grading pit run, compaction method A	Cubic Yard	228
30326	Road reconditioning	Mile	1.8
60263	18 inch aluminized steel, type 2, corrugated steel pipe, 0.064 inch thickness, method A	Foot	288
60263	36 inch aluminized steel, type 2, corrugated steel pipe, 0.079 inch thickness, method A	Foot	28
62501	Seeding, hydraulic or dry method	All	1
65101	Pit and quarry development	Each	1

FR 477C

ITEM	DESCRIPTION	UNIT	QTY
15101	Mobilization	All	1
20301	Removal of culvert	Each	1
23050	Brushing	Mile	0.7
30103	Aggregate base, grading pit run, compaction method A	Cubic Yard	132
30326	Road reconditioning	Mile	0.7
60263	18 inch aluminized steel, type 2, corrugated steel pipe, 0.064 inch thickness, method A	Foot	72
60264	73 inch span, 55 inch rise aluminized steel, type 2, corrugated steel pipe arch, 0.138 inch thickness, method B	Foot	32
62501	Seeding hydraulic or dry method (Lump Sum)	All	1
63301	Sign system	Each	1
65101	Pit and quarry development	Each	1

General Notes

-All road work will be completed prior to timber haul, unless otherwise approved.

-Contractor is responsible for maintenance of all Forest Service roads over which pit run or limestone material is hauled. Roads shall be bladed or shaped to restore travel way to the condition found prior to haul.

***Prior to any earth disturbing activities, contractor shall call the Pennsylvania One Call System (800-242-1776) and all Oil & Gas Operators in the work area to determine locations of any underground utility lines.**

-Contractor shall furnish, erect and maintain the minimum barricades and warning signs identified in the Special Project Specifications until final inspection and acceptance, unless otherwise directed by the Engineer. Signs shall conform to the Manual on Uniform Traffic Control Devices (MUTCD). **Contractor shall install "ROAD CONSTRUCTION AHEAD" signs on all roads in this project area and at ATV trail crossings. Contractor's sign plan must be approved by Forest Service prior to work. Signs will be covered on weekends, holidays and any days when contractor is not working.**

-Oversize material and boulders encountered during construction or remaining after processing on the finished road surface will be hauled back to the pit or placed as directed by Forest Service.

-Pit run aggregate quantities are estimated as compacted in place on the road.

-Roads shall be completed in such a manner that water shall not pond on roadbed or in ditch lines.

-The Forest Service will mark clearing limits.

-All removed culverts shall be hauled off Federal lands and become the property of the contractor, unless otherwise indicated for salvage by the Forest Service. Culvert removal is paid for under Pay Item 202.

-Forest Service gate plans are available at the Allegheny National Forest Supervisor's Office, 222 Liberty Street, Warren, PA. 16365. The following are gate manufacturers:

Gary Asel Marienville, PA. (814) 927-8380	ADM Welding 2818 Penna. Ave. West Warren, PA. 16365 (814) 723-7227

-Contouring, topsoil respreading, seeding and mulching of disturbed areas as determined by the Forest Service is required.

-DSA limestone shall be shipped at optimum moisture content not exceeding 15%. Limestone loads that fail test parameters as discussed in Section 703 of specifications will be rejected.

-Fabric to be used under all riprap areas shall be Linq 250EX needlepunched nonwoven geotextile or approved equal.

-Contractor shall install silt fence and straw bales at live stream crossings to eliminate sediment in the stream course. Any sediment collected will be removed and stabilized with seed and mulch. This will be considered incidental to Pay Item 603.

FR 305 Lavin Run (Level C)

Station	Road Log/**Work Description**
0+00	Intersection with State Route 59
0+00-1+20	**Apply 46 tons 1" minus commercial surfacing (46 tons)**
0+00-56+75	**Recondition roadbed, clean all culverts, and perform roadside brushing (light)**
0+00-98+54	(2) pipelines buried left side of road
0+00-9+60	Limestone surfacing (depleted)
0+15	STOP sign left
0+30	Road number sign right
0+55	WEIGHT LIMIT sign right
0+70	NO OUTLET sign right
1+30	Parking area left
3+75	18" x 28' CMP (2003), **clean inlet**
3+90	Turnout right
7+25-11+30	**Redefine ditch left**
7+25	24" x 28' CMP (2003), live stream, **place splash rocks at outlet**
7+80	**Construct sediment basin**
11+40	**Redefine leadoff ditches left and right, remove berm**
11+50-12+50	Turnout right
14+15	OGM road left
17+20	Turnout right
21+40	CAUTION: Pipeline crosses road
26+25	Turnout left
31+75	FR 305A right
32+30	Turnout right
33+85	75' leadoff ditch right, **redefine**
36+15	**Remove 22" x 13" x 28' CMPA, install 18" x 30' CMP on right forward skew, apply 12 CY pit run**
36+80	Leadoff ditch right
39+00-40+00	Turnout right
39+50	Leadoff ditch right, **remove berm**
39+50-49+50	Existing limestone surfacing (depleted)
44+20	64" x 43" x 46' CMPA, **place splash rock at outlet**
48+55	18" x 32' CMP (2003)
50+25	Turnout left
51+80	18" x 28' CMP, clean inlet and outlet, when replaced use 18" x 30' CMP
55+00	Turnout left
56+75	FR 305C left, **end reconditioning,** road continues

FR 305A Lavin Run A (Level D)

Station	Road Log/**Work Description**
0+00	FR 305 station 31+75
0+00-34+80	**Recondition roadbed, clean all culverts, and perform roadside brushing**
0+00	12" x 40' CMP
0+35	Road number sign
0+80	Forest Service gate
2+00-5+20	**Apply 9" pit run surfacing (120 CY)**
3+20	Log landing right
5+20-18+00	**Re-align ditch line right, CAUTION pipeline right**
8+65	**Remove 12" x 20' CMP, install 18" x 22' CMP, apply 36 CY pit run to build up road**
14+05	12" x 20' CMP, **clean inlet and outlet**
18+80	Landing right
22+65	**Remove 12" x 20' CMP**
23+60	**Install 18" x 22' CMP, apply 36 CY pit run to build up road**
26+90	12" x 22' CMP
27+05	OGM road left
27+05-34+80	**Apply 6" pit run surfacing (194 CY)**
27+60	Overhead electric line
29+10	**Install 18" x 26' CMP, apply 12 CY pit run**
29+25	Landing left and right
33+20	**Install 18" x 26' CMP, apply 12 CY pit run**
34+80	OGM road right, truck turnaround, **end reconditioning**

FR 305C Lavin Run Spur D (Level D)

OGM operator is Catalyst. Contact Matt Brooker at Ph #412-526-1167 (gas, oil, electric lines buried at least 3' deep in same ditch)

Station	Road Log/**Work Description**
0+00	FR 305 station 56+50
0+00-12+75	**Recondition roadbed, perform roadside brushing (light), and clean culverts**
0+50-2+15	**Apply 6" pit run**
0+70	Well site right
1+00-6+05	**Construct ditch right**
1+03	Existing 18" x 24' CMP (new) crushed at inlet, **construct leadoff ditch at outlet**
1+05	Road number sign right
1+10	Forest Service gate, **replace red striped signs (by Forest Service)**
2+15	12" x 20' steel pipe casing, **re-install casing, lower at inlet, extend leadoff ditch at outlet, remove berm**
3+90	**Install 12" x 40' steel casing on right forward skew, apply 12 CY pit run**
4+25	Road to well left
5+00	**Place 12 CY pit run**
6+05	15" x 22' CMP
8+70	Well and tank site left
9+05	OGM road left and right, truck turnaround
9+85	**Remove 15" x 22' CMP, install 18" x 26' CMP, apply 12 CY pit run**
10+90	**Install 18" x 26' CMP, construct leadoff ditch left, apply 12 CY pit run**
12+75	**Remove 15" x 22' CMP, install 18" x 22' CMP on right forward skew, apply 12 CY pit run**
12+75	**End reconditioning**

FR 307 Irishtown

Station	Road Log/**Work Description**
0+00	Intersection with State Route 219
0+00-33+90	**Recondition roadbed, clean all culverts, and perform roadside brushing (light)**
0+00-5+90	Existing limestone surfacing
0+40	STOP sign left
0+55	Road number sign right
1+55	OGM buildings right
2+10	**Remove 36" x 28' CMP, install 66" x 51" x 30' CMPA on right forward skew, apply 60 CY pit run**
2+20	WEIGHT LIMIT sign right
3+00-4+50	Turnout left
3+54	**Leadoff ditch left, re-define ditch**
5+65	OGM road left
5+90	Leadoff ditch left and right
5+90-28+00	DSA limestone surfacing (2003)
8+60	Leadoff ditch right
9+10	OGM road left
10+65	18" x 28' CMP (2003)
12+00-13+50	Turnout right
14+15	FR 307A left
14+30	16" x 32' steel casing
15+80	**18" x 24' CMP, clean inlet**
18+25	20" x 30' steel casing, **place 4 tons riprap**
18+25-19+25	Turnout right
21+05	Leadoff ditch right
22+25	20" x 32' steel casing, **sinkhole place 7 tons R-5 riprap**
22+25	100' turnout left
23+00	OGM road left
24+60	35" x 24" x 28' CMPA, when replaced 64" x 43" x 30' CMPA, **place 12 tons riprap at outlet**
24+65	Turnout right
27+05	20" x 26' steel casing, clean inlet and outlet
29+15	Leadoff ditch left
29+90	CAUTION: Pipeline crosses road (Columbia Gas)
30+40	18" x 24' CMP (89)
30+50-31+50	Turnout left
33+90	Intersection FR 307, 308 and 307B, 16" x 52' pipe casing across 307B intersection, **end of reconditioning**
37+06	CAUTION: Pipeline crosses road
37+80	16" x 30' pipe casing
39+60	Turnaround right
40+05	Leadoff ditch right
40+05	Property line private gate

FR 311 Lewis Run (Level D)

Station	Road Log/**Work Description**
0+00	Station 58+80 FR 310
0+00-113+59	**Recondition roadbed, see TYPICAL RECONDITION SECTION, perform roadside see TYPICAL BRUSHING DETAIL**
0+42	Road number sign right
1+99	Leadoff ditch right
2+69	12" x 26' pipe casing
2+70-4+20	Turnout right
3+74	CAUTION! Exposed pipeline right
6+85	12" x 26' pipe casing
9+61	OGM road right
9+85	12" x 25' pipe casing
12+16	18" x 34' CMP
13+10-14+60	Turnout left
14+60	16" x 30' pipe casing
15+70	OGM road right
16+40-17+90	Turnout right
16+50	18" x 34' CMP
18+10	Overhead electric line, pipeline crossing
18+74	OGM road right
19+66	20" x 30' pipe casing
21+00-36+00	2RC limestone surfacing
21+11	16" x 24' pipe casing
21+15-22+65	Turnout right
22+70	18" x 36' CMP
22+80	OGM road left
23+27	16" x 30' pipe casing
24+59	16" x 30' pipe casing
25+00-26+30	Double lane around curve
26+40-27+40	Turnout left
27+45	18" x 24' CMP
28+66	16" x 26' pipe casing
30+00-31+00	Turnout left
31+63	18" x 30' CMP
32+13-33+13	Turnout left
33+26	CAUTION: Overhead electric line
33+31	OGM road right
33+83	18" x 28' CMP
33+90-34+90	Turnout left
35+21	12" x 22' pipe casing
37+65	18" x 28' CMP

38+20	OGM road left
39+30-40+30	Turnout left
40+58	CAUTION! Overhead electric line and pipeline crosses road
42+30	16" x 30' pipe casing
43+24	16" x 30' pipe casing
44+90-46+15	Turnout left
47+97	16" x 22' pipe casing
49+96	CAUTION! High pressure gas line crosses road
50+74	16" x 26' pipe casing
51+25	OGM road left
51+85	CAUTION! Electric line crosses road
53+40	20" x 26' pipe casing
53+61	OGM road left
53+61	CAUTION! Electric line crosses road
54+28	Leadoff ditch right
55+74	16" x 22' pipe casing
57+94	OGM road ahead, FR 311 bears right
59+45	Pit access road left
59+90	12" x 24' pipe casing
62+27	12" x 22' pipe casing
63+70	OGM well site right
64+84	Turnout right
66+78	CAUTION! Electric line crosses road
66+97	OGM road left, FR 311A right
67+69	CAUTION: Overhead electric line
69+52	12" x 22' pipe casing
70+17	Well W3 right, CAUTION low overhead electric line to well
72+40	CAUTION! Overhead electric line
73+73	12" x 22' pipe casing
76+26	12" CMP
78+50-79+50	Turnout left
81+50-82+50	Turnout right
83+65	Turnaround
85+50	Leadoff ditch right
86+13	12" x 22' pipe casing
86+73	Leadoff ditch right
86+80-87+80	Turnout left
87+52	Leadoff ditch right
89+00	CAUTION: Overhead electric line, shallow pipeline crossing
89+56	12" x 22' pipe casing
90+25	Use existing road as turnaround
91+00	Overhead electric line needs raised
93+45	Oil pipeline on surface
95+00	OGM road left, FR 311 ahead, **install Carsonite road number sign (to be installed by Forest Service)**
97+11	**Install 18" x 26' CMP, apply 12 CY pit run**

97+11-113+59	**Widen road and reconstruct to TYPICAL CONSTRUCTION SECTION**
99+68	Pipeline crosses road, line is on surface
99+94	**Install 18" x 26' CMP on right forward skew, apply 12 CY pit run**
102+66	**Install 18" x 26' CMP on right forward skew, apply 12 CY pit run**
105+01	**Construct turnout left (high cut bank), apply 24 CY pit run**
106+27	**Install 18" x 26' CMP on right forward skew, apply 12 CY pit run**
108+08	**Install 18" x 26' CMP, apply 12 CY pit run**
109+25	**Construct turnout left, apply 24 CY pit run**
112+03	**Install 18" x 26' CMP, apply 12 CY pit run**
112+85	Overhead electric line
113+16	OGM road left and right
113+19	Old road continues straight ahead

FR 464 Scott

Station	Road Log/**Work Description**
0+00	Intersection with FR 455
0+00-15+90	**Recondition roadbed see TYPICAL RECONDITION SECTION, remove potholes, clean culverts**
0+00-15+90	**Perform roadside brushing see TYPICAL BRUSHING DETAIL**
0+00-7+00	**Apply 4" of 1" minus commercial surfacing (230 tons)**
0+21	Road number sign right
0+55	NARROW ROUGH ROAD sign right
0+63	STOP sign left
1+97	Forest Service gate, needs paint/signs by others
2+60	**Chappel Fork stream crossing, remove two 48" x 38' CMPs, install 73" x 55" x 40' CMPA, apply 120 CY pit run, (Forest Hydrologist should be present when staking culvert elevations)**
3+23	Leadoff ditch left
3+80	OGM road left
4+89	18" CMP
7+20	OGM road right
7+70	OGM road left
8+10	Small turnout right
9+36	12" pipe casing
13+00	OGM road right, well site left
15+90	Intersection FR 464 and FR 464 A right

FR 464A Scott A

Station	Road Log/**Work Description**
0+00	Intersection FR 464 (Station 15+90) and FR 464 A
0+00-17+00	**Perform roadside brushing see TYPICAL BRUSHING DETAIL**
0+00-17+00	**Recondition roadbed see TYPICAL RECONDITION SECTION, clean all culverts**
0+15	Road number sign right, LOGGING ROAD CLOSED TO PUBLIC MOTOR VEHICLE USE sign right
2+25	Well left
5+00	12" pipe casing
6+12	OGM road right, CAUTION: overhead electric line
7+00	Turnout right
8+81	12" x 28' culvert
9+50	Turnout left
10+50	Large tank left, well site left
10+67	12" x 30' culvert (buried/locate)
11+80	OGM road left and right
14+12	OGM road left
15+75	Well left
16+80-17+00	Turnaround right, old pit
17+00-63+05	**Reconstruct road to TYPICAL CONSTRUCTION SECTION, clean all culverts, perform roadside brushing see TYPICAL BRUSHING DETAIL**
18+30	OGM riser right
18+40	Road with well right
19+35	!2" steel casing, inlet plugged
22+35	Tee intersection, take right turn
23+40	Electrical riser left side
23+30	ATV trail or grassy OGM road right
24+45	**Crown road to eliminate water running down left side of road**
25+00	**Clean 12" x 34' casing on skew**
26+05-29+80	Sandy road surface
27+15	**Clean 12" x 40' steel casing on skew**
27+90	Well left
28+00-33+30	**Apply 4" of 1" minus DSA surfacing (161 tons)**
30+60	Large 95" x 67" CMPA stream crossing, **replace with 95" x 67" x 42' CMPA, apply 96 CY pit run <u>(Forest Hydrologist should be present when staking culvert elevations</u>**
31+80	Steep ATV trail, pipelines to left
34+50	12" x 31' steel casing, long outlet ditch
36+15	15" x 40' CPP
36+45	Well road right

39+50	OGM road left and right
40+70	OGM road left with tank
41+70	Riser left
43+00	Turnout left
46+25	OGM road right
46+75	Riser left
50+00	OGM road right
51+50	Riser left
51+75	Turnout left
53+30	Turnout right
53+60	Well left
53+75	12" x 30' steel casing
55+40	OGM road right
57+50	12" x 29' steel casing
58+70	OGM road left
63+05	OGM road left, **end reconstruction**

FR 477 Little Buck Lick

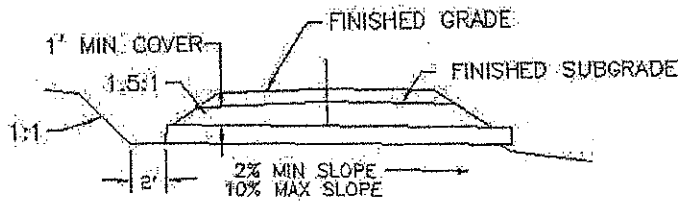
Station	Road Log/**Work Description**
0+00	Intersection with FR 455 station 255+62
0+00-95+65	**Recondition roadbed, see TYPICAL RECONDITION SECTION, perform roadside brushing, see TYPICAL BRUSHING DETAIL, clean all culverts and leadoff ditches, and reshape all turnouts**
0+15	STOP sign left
0+50	Road number sign right
0+80	Forest Service gate, **to be repaired by others**
2+90	Road to old pit left (or wildlife opening)
5+80	Well road left and old stone pit left, **grade road to drain**
7+85	Well road right
8+35	**Large pothole, apply 12 CY pit run**
9+85	Well left
11+85	Intersection with FR 477A right
12+65	Well road left
14+30	**Install 18" x 32' CMP on LFS, apply 12 CY pit run**
16+75	**Remove 18" x 24' CMP, install 36" x 28' CMP, live drainage**
16+50-18+60	**Apply 72 CY pit run**
18+00	Turnout left
18+60-29+60	**Rutting, reshape road, re-define right ditch,**
19+30	**Install 18" x 34' CMP on RFS, construct 50' outlet ditch, apply 12 CY pit run**
25+05	Turnout and OGM road left
25+70	16" x 20' steel pipe casing
29+00	OGM road right
29+05	16" x 40' steel pipe casing
30+60	**Remove 16" x 18' steel pipe casing, apply 12 CY pit run, re-grade ditch to drain to 29+05**
31+00	OGM road left
33+30	**Remove 16" x 20' steel pipe casing, install 18" x 24' CMP, apply 12 CY pit run**
38+15	**Remove 16" x 20' steel pipe casing, install 18" x 24' CMP, apply 12 CY pit run**
CAUTION: Plastic pipeline exposed in ditch at outlet end	
38+20-39+20	Turnout left, well right
42+40	OGM road right, FR 477 bends left
43+80	OGM road left
44+45	**Remove 12" x 24' CMP, install 18" x 24' CMP, apply 12 CY pit run**
46+90	16" x 20' steel pipe casing
46+90-47+90	Turnout right, well right

48+45	16" x 20' steel pipe casing
50+25	16" x 21' steel pipe casing
52+15	OGM road left and right
53+95	16" x 20' steel pipe casing
58+45	OGM road left, old stone pit right
59+50	Well left
60+60	CAUTION pipeline in ditch right side of road
62+05	**Remove 12" x 20' steel pipe casing, install 18" x 24' CMP, apply 12 CY pit run**
62+10-63+10	Turnout left
64+65	12" x 46' steel pipe casing, couldn't find outlet end
65+20	OGM road right
65+30	**Install 18" x 24' CMP, apply 12 CY pit run**
67+00	**Remove 16" x 20' steel casing, install 18" x 24' CMP, apply 12 CY pit run**
69+30	Intersection with FR 477B
72+55	**Pipe buried, install 18" x 28' CMP, apply 12 CY pit run**
75+15	OGM road right
77+50	16" x 30' steel casing, **remove old pipe left and right**
79+40-91+20	**Apply 4" of 1" minus aggregate surfacing**
79+40	OGM road/well left
81+00	**Reconstruct leadoff ditch right**
82+10	**Reconstruct leadoff ditch left**
83+50	Bucklick Run, bottomless arch **(16' wide)**
83+90	Small turnout left
84+90	**Construct leadoff ditch left and right, to keep water off road**
85+75	**Construct leadoff ditch left**
86+60	**Remove 12" x 22' CMP, install 18" x 24' CMP, apply 12 CY pit run**
87+15	OGM road right
88+55	OGM road left
89+20	Well right
90+25	**Remove casing, completely buried, install 18" x 26' CMP on left forward skew, apply 12 CY pit run**
91+20	**Reconstruct leadoff ditch left**
92+25	OGM road right
93+30	OGM road right, this is FR 477C roads bends right, well jack
95+45	OGM buildings left
95+65	OGM road straight ahead

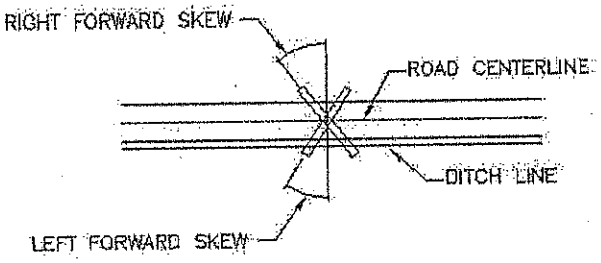
FR 477C Little Bucklick Spur C (Level D)

Station	Road Log/**Work Description**
0+00-37+90	**Reconstruct existing road to TYPICAL CONSTRUCTION SECTION, clean all culverts and perform roadside brushing as needed**
0+20	**Install road number sign right**
0+30	Well #12 left
5+50	OGM road left
5+70	Riser pipe right
6+60	16" x 21' steel casing
10+05	OGM road right, stay left
11+25	16' x 21' steel casing
13+75	Well jack 20' right
15+00	**Install 18" x 24' CMP, apply 12 CY pit run**
17+85	Tank battery left
18+00	Well jack left, road bends right, drops
20+65	Abandoned OGM road right
20+75	**Install 18" x 24' CMP, apply 12 CY pit run**
24+65	**Remove 60" x 42" x 32' CMPA, install 73" x 55" x 32' CMPA, apply 96 CY pit run**
26+20	Block access road left
27+50	OGM road right, maintain left fork
28+60	Pipeline riser left
29+20	**Install 18" x 24' CMP, apply 12 CY pit run**
31+05	Turnout left
35+40	Well jack right, tank battery right
35+80	OGM road right
36+75	15" x 20' CPP
37+90	Well jack #23 right
43+25	Well jack #21 left

culvert_details.jpg (750x1050x16M jpeg)



CULVERT SECTION



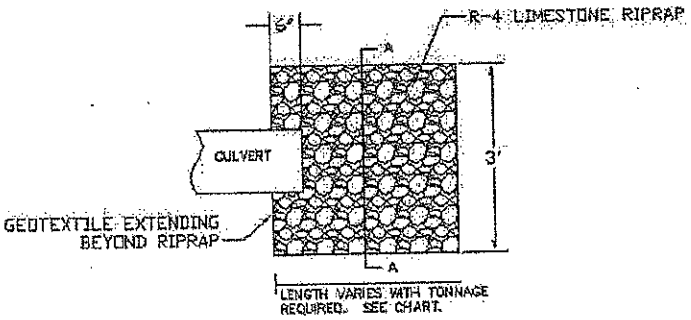
SKEW DETAIL

NOTE: Field locate ditch to minimize new clearing

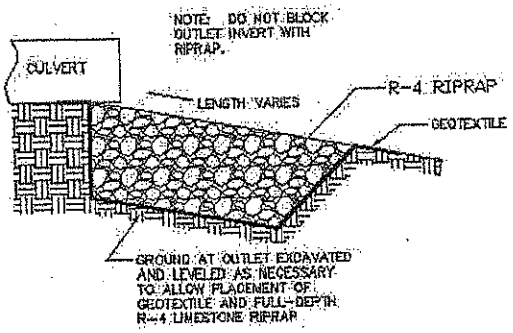
OUTLET/LEAD OFF DITCH SECTION

Riprap_Detail.jpg (750x1050x16M jpeg)

CULVERT OUTLET RIPRAP DETAIL

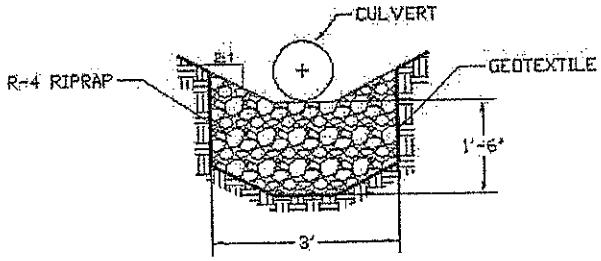


PLAN VIEW

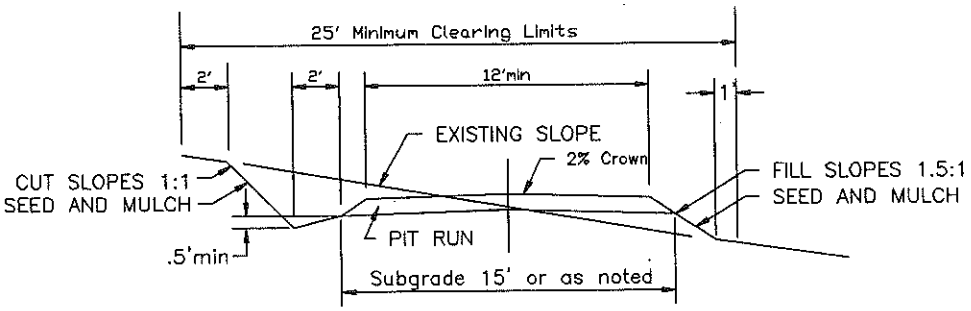


R-4 RIPRAP	
QUANTITY	APPROXIMATE COVERAGE
2 TONS	3' X 7' X 1.5'
3 TONS	3' X 10' X 1.5'
4 TONS	3' X 13' X 1.5'

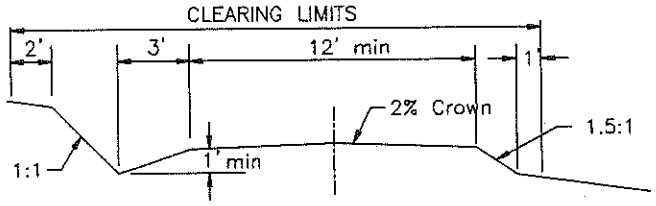
PROFILE



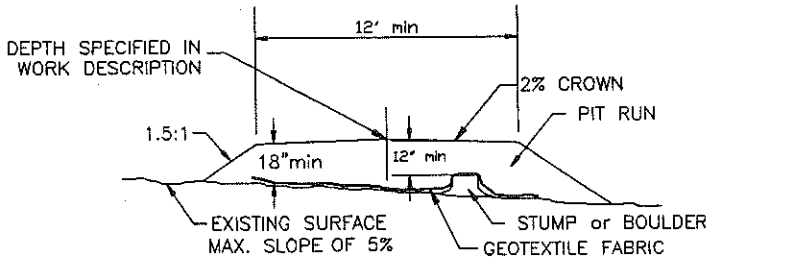
SECTION A-A



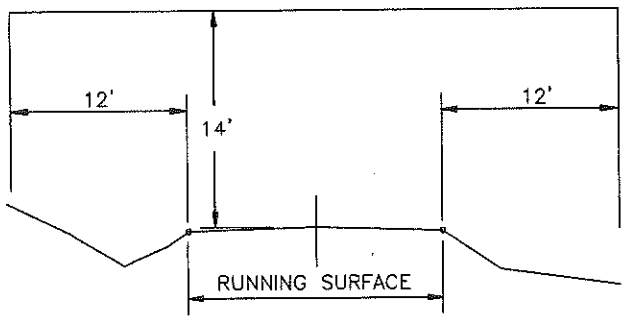
TYPICAL CONSTRUCTION SECTION



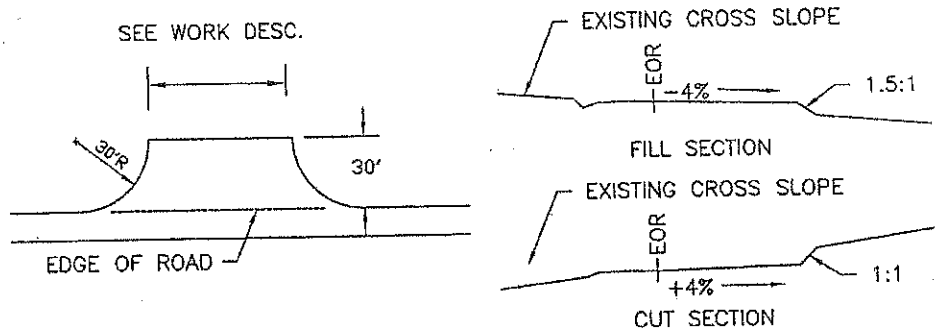
TYPICAL RECONDITION SECTION



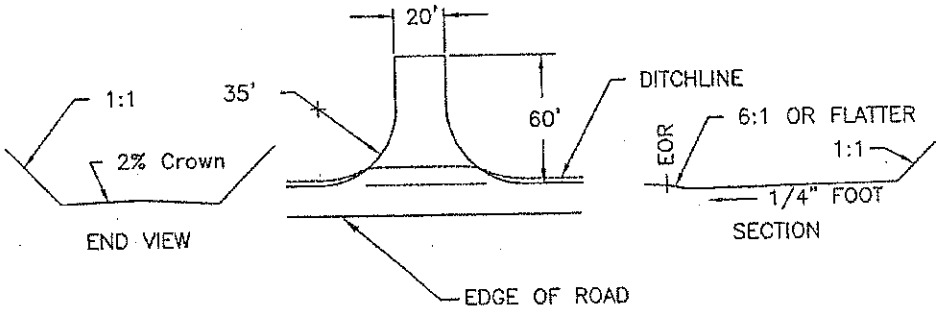
TYPICAL FABRIC SECTION W/O TEMPLATE



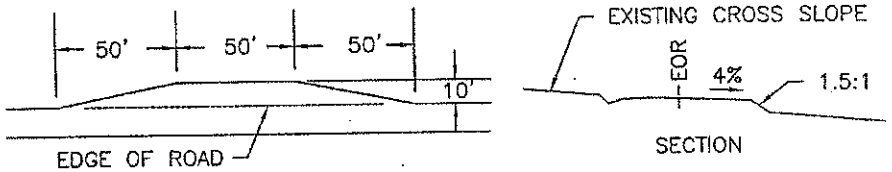
ROADSIDE BRUSHING DETAIL



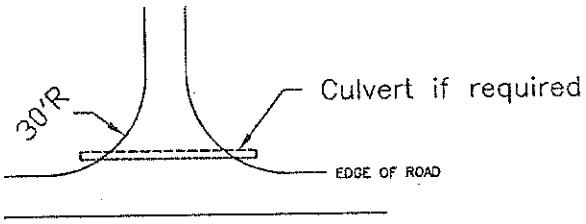
PARKING LOT DETAIL



TURNAROUND DETAIL



TURNOUT DETAIL



INTERSECTION DETAIL

GENERAL NOTES

ALL STEEL SHALL BE PAINTED WITH (2) COATS OF IRON OXIDE RED PRIMER AND (1) COAT OF WALNUT BROWN PAINT, FED. STANDARD 595 A PAINT NO. 20140 (EXCEPT PIVOT TUBE)

ALL STEEL SHALL BE NEW MATERIAL

WELD ALL CROSS ARM ASSEMBLY JOINTS WITH 3/16" FILLETS ALL AROUND ALL WELDS ON GATE ASSEMBLY SHALL BE STRUCTURALLY SOUND

DRILL 1/4" DIAMETER HOLES 4" ON CENTER IN BOTTOM OF CROSS ARM TO FACILITATE DRAINAGE.

APPLY GREASE TO OUTSIDE OF PIVOT TUBE, ENTIRE LENGTH, PRIOR TO INSTALLATION OF CROSS ARM ASSEMBLY. TYPE OF GREASE SHALL BE EXTREME PRESSURE MULTIPURPOSE WHEEL BEARING GREASE OR EQUAL

POSTS SHALL BE ENCASED WITH CONCRETE TO WITHIN 1 FT. OF GROUND LEVEL AND BACKFILL COMPACTED (3 POSTS)

PRIOR TO GATE INSTALLATION, NOTIFY FOREST SERVICE FOR LOCATION ON ROAD

PARTS MAY BE FLAME CUT AND ALL BURRS REMOVED

INSTALL SIGNS AFTER INSTALLATION OF GATE

TECHNICAL CONTACT IS JIM DUCKETT,
FOREST SERVICE, WARREN, PA. (814) 728-6257

SIGN CODE

① (2) L-R AND (2) R-R TYPE I BARRICADE MARKERS
- RED ON WHITE - 12" x 36"

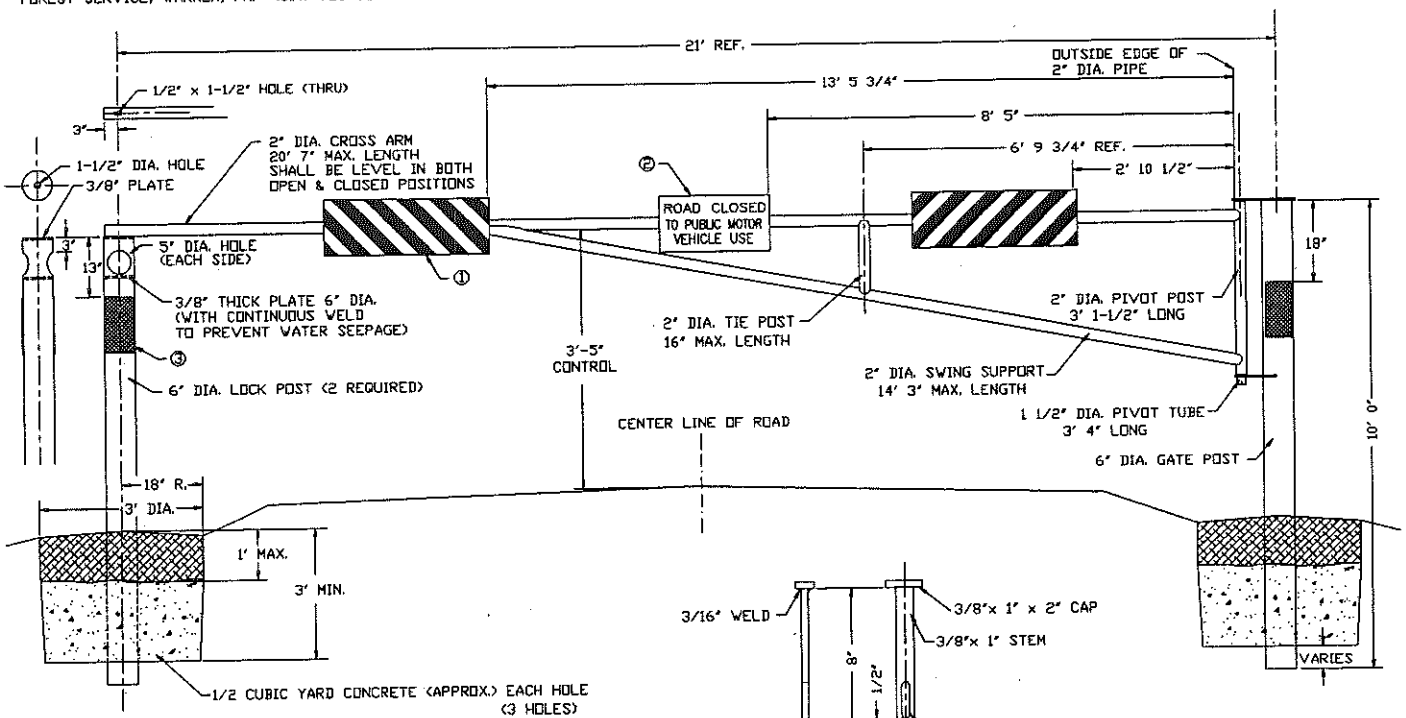
② (1) ROAD CLOSED TO PUBLIC MOTOR VEHICLE USE

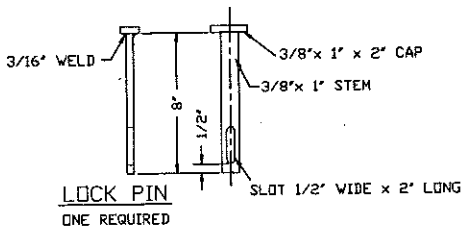
③ (5) TYPE 2 OBJECT MARKERS (OM-2-B)
- YELLOW (REFLECTORIZED) - 6" x 12"
(2) ON GATE POST AND (2) ON CLOSED POSITION LOCK POST
(1) ON OPEN POSITION LOCK POST FACED TO ONCOMING TRAFFIC

NOTE: ALL SIGNS SHALL BE FURNISHED BY THE FOREST SERVICE AND INSTALLED BY THE CONTRACTOR.

ESTIMATED QUANTITIES

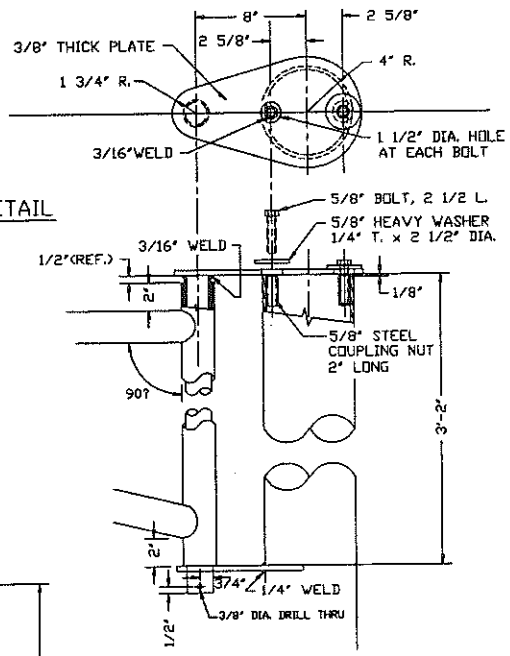
MATERIAL	QUANTITY (LF)	REMARKS
1-1/2" DIA. PIPE(NOM.)	3' 4"	PIVOT TUBE
2" DIA. PIPE(NOM.)	39' 4"	CROSS ARM ASSEMBLY
6" DIA. PIPE(NOM.)	30' 0"	GATE POSTS (3)
3/8" x 1" STRAP	0' 10"	LOCK PIN
3/8" x 8" PLATE	4' 1"	MISC.
BOLTS, NUTS, WASHERS		TWO (2) OF EACH



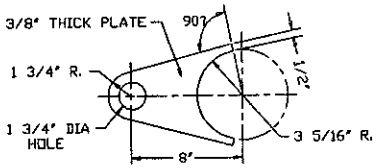


LOCK PIN
ONE REQUIRED

NOTE: PLATE SIZE 8" WIDE x 13 3/4" LONG



DETAIL



NOTE: PLATE SIZE 8" WIDE x 10" LONG

LEVEL "D" FOREST SERVICE GATE	
ALLEGHENY NATIONAL FOREST WARREN, PA	
DES. R.NEARING, B.JOHNSON, R.GALLO-9/27/89	
DRN. B.JOHNSON & R.GALLO - 12/89	
NOT TO SCALE	

Pit Development Plan

Pit run for this project will come from the 305Ce, 307B, 311, 464A and 477 pits.

A. Pit Development
   1. The overburden removed will be stockpiled in a location agreed upon by the Forest Service and the contractor, and used for pit reclamation.
   2. Only ONE face of the pit is to be open and worked on at any given time.
   3. High walls are a violation of OSHA regulations.
   4. The pit floor will be sloped to prevent pooling of water.
   5. Any oversized material left over in the pit area shall be stockpiled at a mutually agreed upon, by Forest Service and contractor, location.
   6. No disposed equipment, trash, vehicles, pipe, or miscellaneous supplies will be allowed to accumulate or be stored in the pit and surrounding areas unless first agreed to by the Forest Service.
   7. Operator will not undermine any boundary of the pit area.
   8. No slash, soil or stumps will be permitted against live trees. No undercutting of roots of live trees allowed.

B. Timber
   1. Slash resulting from this project will be scattered outside the clearing limits of the road and pit site. Stumps will be scattered at random and set upright. Stumps will be pulled into the pit floor not out into the woods.
   2. The Forest Service will mark any further pit expansion after being notified, in advance by the Operator.
   3. Any timber stored within the pit area that is decked for a timber sale shall not be damaged or buried. Timber shall be decked at a location designated by the Forest Service.
   4. No timber may be cut or pushed over unless it is marked by the Forest Service and compensated for.

C. Pit Reclamation
   1. As each open face is depleted of suitable rock material, that area will be reclaimed promptly to a slope of 1.5:1 or greater using the previously stockpiled overburden.
   2. The slope/reclaimed area will then promptly be seeded, fertilized, and mulched using a non-exotic seed mixture designed by the Forest Service.
   3. Areas seeded that are not receiving 50% or greater germination will be reseeded within 30 days, or the next suitable seeding season.
   4. No open face of the pit will be closed without prior notification to the Forest Service.
   5. When excavation of material is complete, the Forest Service will be notified to approve and document the reclamation work.

SCHEDULE OF ITEMS, SPECIFICATIONS & DRAWINGS FOR SPECIFIED ROADS

ROAD SUMMARY

SPECIFIED ROADS

a. Description of Work:

Reconstruction/Maintenance: FR 305, 305A, 305C, 307, 311, 464, 464A, 477, 477C

b. Construction Costs:

Road No.	Miles	Estimated road cost	Engineer's Estimate	Reconst. Deposits
305	1.1	$5,496.00	$7,682.00	$500.00
305A	0.7	$16,113.00	$19,066.00	$1,600.00
305C	0.2	$5,735.00	$6,910.00	$600.00
307	0.6	$10,056.00	$11,297.00	$1,000.00
311	2.2	$13,104.00	$16,088.00	$1,300.00
464	0.3	$20,700.00	$23,650.00	$2,000.00
464A	0.3	$2,000.00	$3,000.00	
	0.9	$26,452.00	$29,971.00	
477	1.8	$21,920.00	$25,810.00	$2,200.00
477C	0.7	$17,615.00	$20,600.00	
Total		$139,191.00	$164,074.00	$9,200.00

Completion dates: 9/30/2012

FR 305							
Pay Item	Description	Pay Unit	Estimated Quantity	Unit Price	Extended Total	Engineer's Estimate Unit Price	Engineer's Extended Total
15101	Mobilization (Lump Sum)	All	1	500.00	$ 500.00	1000.00	$ 1,000.00
20301	Removal of culverts	Each	1	90.00	$ 90.00	110.00	$ 110.00
23050	Brushing	Mile	1.1	750.00	$ 825.00	1800.00	$ 1,980.00
30103	Aggregate base, grading pit run, compaction method A	Cubic Yard	12	12.00	$ 144.00	14.00	$ 168.00
30115	Aggregate surface course, Type 1" minus, compaction method A	Ton	46	27.00	$ 1,242.00	29.00	$ 1,334.00
30326	Road reconditioning	Mile	1.1	1500.00	$ 1,650.00	1800.00	$ 1,980.00
60263	18 inch aluminized steel, type 2, corrugated steel pipe, 0.064 inch thickness, method A	Foot	30	31.50	$ 945.00	33.00	$ 990.00
62501	Seeding, hydraulic or dry method (Lump Sum)	All	1	100.00	$ 100.00	120.00	$ 120.00
TOTAL					$ 5,496.00		$ 7,682.00

FR 305A							
Pay Item	Description	Pay Unit	Estimated Quantity	Unit Price	Extended Total	Engineer's Estimate Unit Price	Engineer's Extended Total
15101	Mobilization (Lump Sum)	All	1	500.00	$ 500.00	1534.00	$ 1,534.00
23050	Brushing	Mile	0.7	1500.00	$ 1,050.00	1800.00	$ 1,260.00
30103	Aggregate base, grading pit run, compaction method A	Cubic Yard	458	12.00	$ 5,496.00	14.00	$ 6,412.00
30326	Road reconditioning	Mile	0.7	1500.00	$ 1,050.00	1800.00	$ 1,260.00
60263	18 inch aluminized steel, type 2, corrugated steel pipe, 0.064 inch thickness, method **A**	Linear Foot	200	31.50	$ 6,300.00	33.00	$ 6,600.00
62501	Seeding, hydraulic or dry method (Lump Sum)	All	1	800.00	$ 800.00	1000.00	$ 1,000.00
65101	Pit and quarry development	Each	1	917.00	$ 917.00	1000.00	$ 1,000.00
TOTAL					$ 16,113.00		$ 19,066.00

FR 305C							
Pay Item	Description	Pay Unit	Estimated Quantity	Unit Price	Extended Total	Engineer's Estimate Unit Price	Engineer's Extended Total
15101	Mobilization (Lump Sum)	All	1	200.00	$ 200.00	650.00	$ 650.00
20301	Removal of culverts	Each	2	90.00	$ 180.00	110.00	$ 220.00
23050	Brushing	Mile	0.2	750.00	$ 150.00	1800.00	$ 360.00
30103	Aggregate base, grading pit run, compaction method A	Cubic Yard	102	12.00	$ 1,224.00	14.00	$ 1,428.00
30326	Road reconditioning	Mile	0.2	750.00	$ 150.00	900.00	$ 180.00
60201	!2" steel casing	Foot	40	30.00	$ 1,200.00	32.00	$ 1,280.00
60263	18 inch aluminized steel, type 2, corrugated steel pipe, 0.064 inch thickness, method A	Foor	74	31.50	$ 2,331.00	33.00	$ 2,442.00
62501	Seeding, hydraulic or dry method (Lump Sum)	All	1	300.00	$ 300.00	350.00	$ 350.00
TOTAL					$ 5,735.00		$ 6,910.00

FR 307							
Pay Item	Description	Pay Unit	Estimated Quantity	Unit Price	Extended Total	Engineer's Estimate Unit Price	Engineer's Extended Total
15101	Mobilization (Lump Sum)	All	1	404.00	$ 404.00	908.00	$ 908.00
20301	Removal of Culverts	Each	1	120.00	$ 120.00	150.00	$ 150.00
23050	Brushing	Mile	0.6	750.00	$ 450.00	900.00	$ 540.00
25102	Placed riprap, class R-5	Ton	23	40.00	$ 920.00	45.00	$ 1,035.00
30103	Aggregate base, grading pit run, compaction method A	Cubic Yard	60	12.00	$ 720.00	14.00	$ 840.00
30115	Aggregate surface course, Type 1" minus, compaction method A	Ton	46	27.00	$ 1,242.00	29.00	$ 1,334.00
30326	Road reconditioning	Mile	0.6	750.00	$ 450.00	900.00	$ 540.00
60264	66 inch span, 51 inch rise aluminized steel, type 2, corrugated steel pipe arch, 0.138 inch thickness, method B	Foot	30	185.00	$ 5,550.00	190.00	$ 5,700.00
62501	Seeding, hydraulic or dry method	All	1	200.00	$ 200.00	250.00	$ 250.00
TOTAL					$ 10,056.00		$ 11,297.00

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FR 311							
Pay Item	Description	Pay Unit	Estimated Quantity	Unit Price	Extended Total	Engineer's Estimate Unit Price	Engineer's Extended Total
15101	Mobilization (Lump Sum)	All	1	500.00	$ 500.00	1500.00	$ 1,500.00
23050	Brushing	Mile	2.2	750.00	$ 1,650.00	1000.00	$ 2,200.00
30103	Aggregate base, grading pit run, compaction method A	Cubic Yard	120	12.00	$ 1,440.00	14.00	$ 1,680.00
30326	Road reconditioning	Mile	2.2	1500.00	$ 3,300.00	1800.00	$ 3,960.00
60263	18 inch aluminized steel, type 2, corrugated steel pipe, 0.064 inch thickness, method A	Linear Foot	156	31.50	$ 4,914.00	33.00	$ 5,148.00
62501	Seeding, hydraulic or dry method (Lump Sum)	All	1	1000.00	$ 1,000.00	1200.00	$ 1,200.00
65101	Pit and quarry development	Each	1	300.00	$ 300.00	400.00	$ 400.00
TOTAL					$ 13,104.00		$ 16,088.00

FR 464							
Pay Item	Description	Pay Unit	Estimated Quantity	Unit Price	Extended Total	Engineer's Estimate Unit Price	Engineer's Extended Total
15101	Mobilization (Lump Sum)	All	1	500.00	$ 500.00	1800.00	$ 1,800.00
20301	Removal of culverts	Each	2	300.00	$ 600.00	350.00	$ 700.00
23050	Brushing	Mile	0.3	1500.00	$ 450.00	1800.00	$ 540.00
30103	Aggregate base, grading pit run, compaction method B	Cubic Yard	120	10.00	$ 1,200.00	12.00	$ 1,440.00
30115	Aggregate surface course, grading 1" minus, compaction method B	Ton	230	27.00	$ 6,210.00	29.00	$ 6,670.00
30326	Road reconditioning	Mile	0.3	1500.00	$ 450.00	1800.00	$ 540.00
60264	73 inch span, 55 inch rise aluminized steel , type 2, corrugated steel pipe arch, 0.138 inch thickness, method B	Linear Foot	40	256.00	$ 10,240.00	270.00	$ 10,800.00
62501	Seeding, hydraulic or dry method (Lump Sum)	All	1	300.00	$ 300.00	360.00	$ 360.00
65101	Pit and quarry development	Each	1	250.00	$ 250.00	300.00	$ 300.00
TOTAL					$ 20,200.00		$ 23,150.00

FR 464A							
Pay Item	Description	Pay Unit	Estimated Quantity	Unit Price	Extended Total	Engineer's Estimate Unit Price	Engineer's Extended Total
15101	Mobilization (Lump Sum)	All	1	500.00	$ 500.00	2300.00	$ 2,300.00
20301	Removal of culverts	Each	1	250.00	$ 250.00	300.00	$ 300.00
23050	Brushing	Mile	1.2	1500.00	$ 1,800.00	1800.00	$ 2,160.00
30103	Aggregate base, grading pit run, compaction method B	Cubic Yard	166	10.00	$ 1,660.00	12.00	$ 1,992.00
30115	Aggregate surface course, grading 1" minus, compaction method B	Ton	161	27.00	$ 4,347.00	29.00	$ 4,669.00
30326	Road reconditioning	Mile	1.2	2500.00	$ 3,000.00	2800.00	$ 3,360.00
60263	18 inch aluminized steel, type 2, corrugated steel pipe, 0.064 inch thickness, method A	Linear Foot	130	31.50	$ 4,095.00	33.00	$ 4,290.00
60264	95 inch span, 67 inch rise aluminized steel pipe, type 2 corrugated steel pipe arch, 0.138 inch thickness, method B	Linear Foot	42	275.00	$ 11,550.00	300.00	$ 12,600.00
62501	Seeding, hydraulic or dry method (Lump Sum)	All	1	500.00	$ 500.00	600.00	$ 600.00
65101	Pit and quarry development	Each	1	250.00	$ 250.00	300.00	$ 300.00
TOTAL					$ 27,952.00		$ 32,571.00

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FR 477							
Pay Item	Description	Pay Unit	Estimated Quantity	Unit Price	Extended Total	Engineer's Estimate Unit Price	Engineer's Extended Total
15101	Mobilization (Lump Sum)	All	1	500.00	$ 500.00	1800.00	$ 1,800.00
20301	Removal of culverts	Each	11	100.00	$ 1,100.00	110.00	$ 1,210.00
23050	Brushing	Mile	1.8	1500.00	$ 2,700.00	1800.00	$ 3,240.00
30103	Aggregate base, grading pit run, compaction method B	Cubic Yard	228	10.00	$ 2,280.00	12.00	$ 2,736.00
30326	Road reconditioning	Mile	1.8	1500.00	$ 2,700.00	1800.00	$ 3,240.00
60263	18 inch aluminized steel, type 2, corrugated steel pipe, 0.064 inch thickness, method **A**	Foot	288	31.50	$ 9,072.00	33.00	$ 9,504.00
60263	36 inch aluminized steel, type 2, corrugated steel pipe, 0.079 inch thickness, method **A**	Foot	28	56.00	$ 1,568.00	60.00	$ 1,680.00
62501	Seeding, hydraulic or dry method (Lump Sum)	All	1	1000.00	$ 1,000.00	1200.00	$ 1,200.00
65101	Pit and quarry development	Each	1	500.00	$ 500.00	600.00	$ 600.00
TOTAL					$ 21,420.00		$ 25,210.00

FR 477C							
Pay Item	Description	Pay Unit	Estimated Quantity	Unit Price	Extended Total	Engineer's Estimate Unit Price	Engineer's Extended Total
15101	Mobilization (Lump Sum)	All	1	500.00	$ 500.00	1700.00	$ 1,700.00
20301	Removal of culverts	Each	1	1000.00	$ 1,000.00	1200.00	$ 1,200.00
23050	Brushing	Mile	0.7	1500.00	$ 1,050.00	1800.00	$ 1,260.00
30103	Aggregate base, grading pit run, compaction method B	Cubic Yard	132	10.00	$ 1,320.00	12.00	$ 1,584.00
30326	Road reconditioning	Mile	0.7	2500.00	$ 1,750.00	3000.00	$ 2,100.00
60263	18 inch aluminized steel, type 2, corrugated steel pipe, 0.064 inch thickness, method A	Foot	72	31.50	$ 2,268.00	33.00	$ 2,376.00
60264	73 inch span, 55 inch rise aluminized steel pipe, type 2 corrugated steel pipe arch, 0.138 inch thickness, method B	Foot	32	256.00	$ 8,192.00	270.00	$ 8,640.00
62501	Seeding, hydraulic or dry method (Lump Sum)	All	1	500.00	$ 500.00	600.00	$ 600.00
63301	Sign system	Each	1	35.00	$ 35.00	40.00	$ 40.00
65101	Pit and quarry development	Each	1	500.00	$ 500.00	600.00	$ 600.00
TOTAL					$ 17,115.00		$ 20,100.00

Specification List

The following specifications will be used for this contract:

Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects – FP-03 U.S. Customary Units. FP-03 is available on the internet at the following site: http://flh.fhwa.dot.gov/resources/pse/specs/

Supplemental Specifications – These specifications were prepared by the Forest Service and are a supplement to or change the FHWA specifications. These are designated SS.

Special Project Specifications – Are specifications prepared on the Allegheny National Forest and pertain to Pennsylvania Department of Transportation nomenclature. These are designated SPS.

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101 - Terms, Format, and Definitions
SS101 - Terms, Format, and Definitions
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SS703 - Aggregate
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SS705 - Rock
718-Traffic Signing and Marking Material
SS718-Traffic Signing and Marking Material

Preface

Preface_wo_03_15_2004_m

Delete all but the first paragraph and add the following:

The Forest Service, US Department of Agriculture has adopted FP-03 for construction of National Forest System Roads.

101 - Terms, Format, and Definitions

101.00_nat_us_07_25_2005

101.01_nat_us_01_22_2009

101.01 Meaning of Terms

Delete all references to the TAR (Transportation Acquisition Regulations) in the specifications.

101.03_nat_us_06_16_2006

101.03 Abbreviations.

Add the following to (a) Acronyms:

AFPA	American Forest and Paper Association
MSHA	Mine Safety and Health Administration
NIST	National Institute of Standards and Technology
NESC	National Electrical Safety Code
WCLIB	West Coast Lumber Inspection Bureau

Add the following to (b) SI symbols:

mp	Milepost
ppm	Part Per Million

101.04_nat_us_03_29_2007

101.04 Definitions.

Delete the following definitions and substitute the following:

Bid Schedule--The Schedule of Items.

Bridge--No definition.

Contractor--The individual or legal entity contracting with the Government for performance of prescribed work. In a timber sale contract, the contractor is the "purchaser".

Culvert--No definition.

Right-of-Way--A general term denoting (1) the privilege to pass over land in some particular line (including easement, lease, permit, or license to occupy, use, or traverse public or private lands), or (2) Real property necessary for the project, including roadway, buffer areas, access, and drainage areas.

Add the following:

Adjustment in Contract Price--"Equitable adjustment," as used in the Federal Acquisition Regulations, or "construction cost adjustment," as used in the Timber Sale Contract, as applicable.

Change--"Change" means "change order" as used in the Federal Acquisition Regulations, or "design change" as used in the Timber Sale Contract.

Design Quantity--"Design quantity" is a Forest Service method of measurement from the FS-96 *Forest Service Specifications for the Construction of Roads and Bridges*. Under these FP specifications this term is replaced by the term "Contract Quantities".

Forest Service--The United States of America, acting through the Forest Service, U.S. Department of Agriculture.

Neat Line--A line defining the proposed or specified limits of an excavation or structure.

Pioneer Road--Temporary construction access built along the route of the project.

Purchaser--The individual, partnership, joint venture, or corporation contracting with the Government under the terms of a Timber Sale Contract and acting independently or through agents, employees, or subcontractors.

Protected Streamcourse--A drainage shown on the plans or timber sale area map that requires designated mitigation measures.

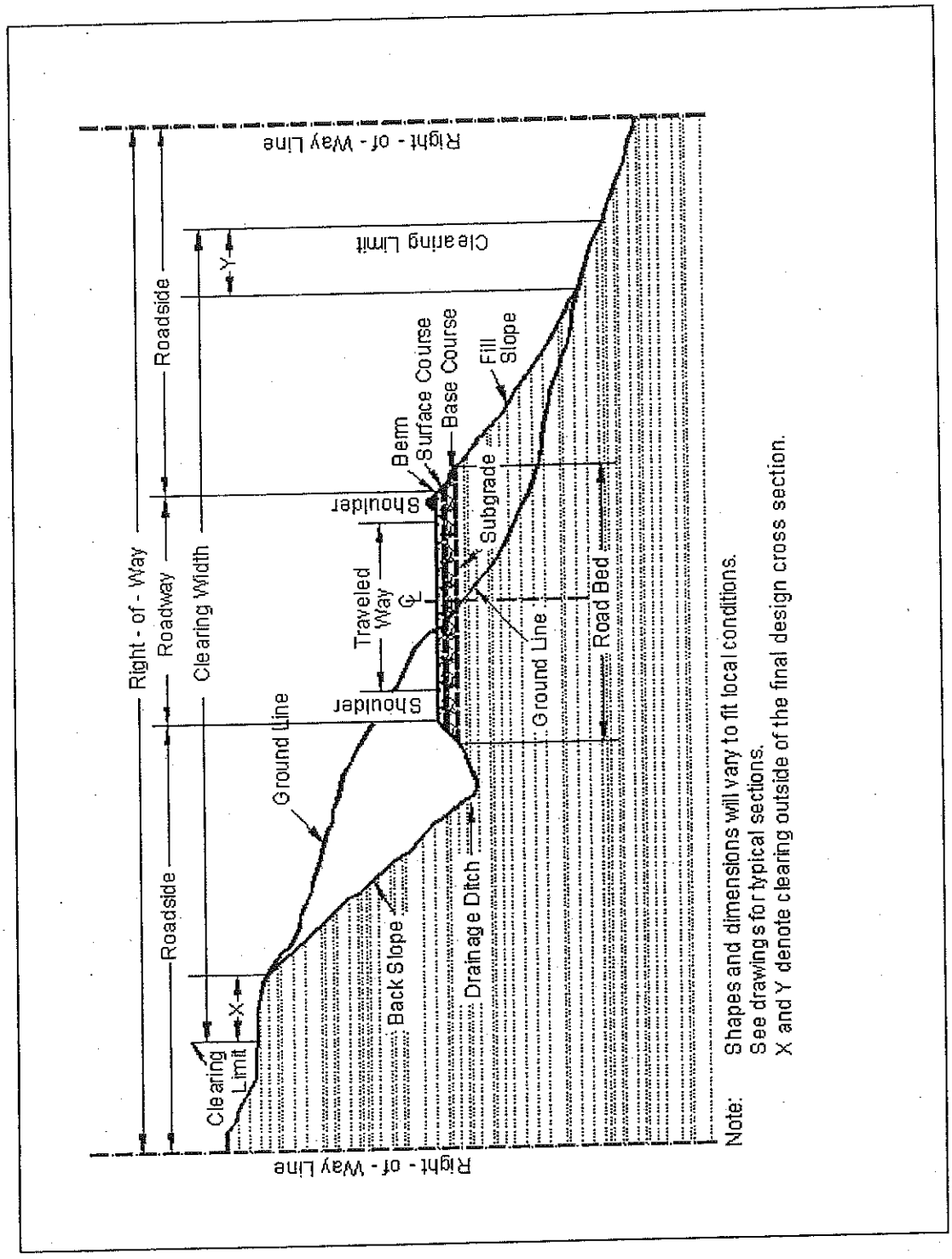
Road Order--An order affecting and controlling traffic on roads under Forest Service jurisdiction. Road Orders are issued by a designated Forest Officer under the authorities of 36 CFR, part 260.

Schedule of Items--A schedule in the contract that contains a listing and description of construction items, quantities, units of measure, unit price, and amount.

Utilization Standards--The minimum size and percent soundness of trees described in the specifications to determine merchantable timber.

Add Figure 101-1—Illustration of road structure terms:

Figure 101-1—Illustration of road structure terms.



102 Bid, Award, and Execution of Contract

Delete Section 102 in its entirety.

103 - Scope of Work

Deletions

Delete all but subsection 103.01 Intent of Contract.

104 - Control of Work

104.00_nat_us_06_16_2006

Deletions

Delete Sections 104.01, 104.02, and 104.04.

104.06_nat_us_02_17_2005

Add the following subsection:

104.06 Use of Roads by Contractor

The Contractor is authorized to use roads under the jurisdiction of the Forest Service for all activities necessary to complete this contract, subject to the limitations and authorizations designated in the Road Order(s) or described in the contract, when such use will not damage the roads or national forest resources, and when traffic can be accommodated safely.

105.02_nat_us_01_18_2007

105.02 Material Sources.

105.02(a) Government-provided sources.

Add the following:

Comply with the requirements of 30 CFR 56, subparts B and H. Use all suitable material for aggregate regardless of size unless otherwise designated. When required, re-establish vegetation in disturbed areas according to section 625.

105.05_nat_us_05_12_2004

105.05 Use of Material Found in the Work.

Delete 105.05 (a) and (b) and the last sentence of the second paragraph and substitute the following:

Materials produced or processed from Government lands in excess of the quantities required for performance of this contract are the property of the Government. The Government is not obligated to make reimbursement for the cost of producing these materials.

106 - Acceptance of Work

106.07 Delete

Delete subsection 106.07.

107 - Legal Relations and Responsibility to the Public

107.05_nat_us_05_11_2004

107.05 Responsibility for Damage Claims.

Delete the entire subsection.

107.06_nat_us_06_16_2006

107.06 Contractor's Responsibility for Work.

Delete the following from the first paragraph.

"except as provided in Subsection 106.07".

107.09_nat_us_06_16_2006

107.09 Legal Relationship of the Parties.

Delete the entire subsection.

107.10_nat_us_06_16_2006

107.10 Environmental Protection.

Add the following:

Design and locate equipment repair shops, stationary refueling sites, or other facilities to minimize the potential and impacts of hazardous material spills on Government land.

Before beginning any work, submit a Hazardous Spill Plan. List actions to be taken in the event of a spill. Incorporate preventive measures to be taken, such as the location of mobile refueling facilities, storage and handling of hazardous materials, and similar information. Immediately notify the CO of all hazardous material spills. Provide a written narrative report form no later than 24 hours after the initial report and include the following:

- Description of the item spilled (including identity, quantity, manifest number, and other identifying information).
- Whether amount spilled is EPA or state reportable, and if so whether it was reported, and to whom.
- Exact time and location of spill including a description of the area involved.
- Containment procedures.
- Summary of any communications the Contractor had with news media, Federal, state and local regulatory agencies and officials, or Forest Service officials.
- Description of clean-up procedures employed or to be employed at the site including final disposition and disposal location of spill residue.

When available provide copies of all spill related clean up and closure documentation and correspondence from regulatory agencies.

The Contractor is solely responsible for all spills or leaks that occur during the performance of this contract. Clean up spills or leaks to the satisfaction of the CO and in a manner that complies with Federal, state, and local laws and regulations.

108 - Prosecution and Progress

108 Delete.

Delete Section 108 in its entirety.

109 - Measurement and Payment

109.00_nat_us_02_17_2005

109 Deletions

Delete the following entire subsections:

109.06 Pricing of Adjustments.

109.07 Eliminated Work.

109.08 Progress Payments.

109.09 Final Payment.

109.02_nat_us_06_16_2006

109.02 Measurement Terms and Definitions.

(b) Contract quantity.

Add the following:

Contract quantities will be adjusted only when there are errors in the original design of 15% or more.

Change the following:

"(b) Cubic yard" to "(c) Cubic yard".

Add the following definition:

(p) Thousand Board Feet (Mbf). 1,000 board feet based on nominal widths, thickness, and extreme usable length of each piece of lumber or timber actually incorporated in the job. For glued laminated timber, 1,000 board feet based on actual width, thickness, and length of each piece actually incorporated in the job.

155 - Schedules for Construction Contracts

155 Delete.

Delete Section 155 in its entirety.

201 - Clearing and Grubbing

201.01_nat_us_02_18_2005

201.01 Description

Replace with the following

This work consists of clearing and grubbing within clearing limits and other designated areas.

201.02 Material:

Delete Tree wound dressing material reference.

201.03 General.

Delete the last sentence.

201.04 Clearing.

Delete the last sentence of (d).

201.04_nat_us_02_18_2005

201.04 Clearing.

Add the following:

When marked in advance, remove dead trees over 6 inches in diameter measured at 12 inches above the ground that lean toward the road and are tall enough to reach the roadbed.

201.04_nat_us_03_03_2005

Construction Requirements

201.04 Clearing.

Add the following:

Utilization standards for merchantable timber are listed below. Fall and buck merchantable material into lengths not to exceed 40 feet. Pieces (logs) meet utilization standards when such

pieces would have met Utilization Standards if bucking lengths were varied to include such material.

Minimum Utilization Standards

Length	Diameter (Inside Bark) at Small End	**33-1/3% Net Scale in % of Gross Scale**
8 feet	9.6inches	

201.04_nat_us_02_22_2005

201.04 Clearing. (c)

Delete paragraph (c) and replace with the following:

(c) In areas outside the excavation, embankment, and slope rounding limits, cut stumps to within 12 inches or one-third of the stump diameter of the ground, whichever is higher, measured on the side adjacent to the highest ground. For timber sales, stump heights will meet the requirements of the Timber Sale contract.

201.04 Clearing.

Delete subsection (d) and replace with the following:

(d) Do not cut vegetation less than 3 feet tall and less than 3 inches in diameter that is within the clearing limits but beyond the roadway and not in a decking area, and that does not interfere with sight distance along the road.

Add the following:

(e) Trim branches of remaining trees or shrubs to give a clear height of 14 feet above the roadbed unless otherwise indicated. Trim tree limbs as near flush with the trunk as practicable.

(f) Remove brush from log decks. Deck logs so that logs are piled parallel to one another; can be removed by standard log loading equipment; will not damage standing trees; will not interfere with drainage, and will not roll. Keep logs in log decks free of brush and soil.

201.06_nat_us_11_04_2004

201.06 Disposal.

Delete the first sentence of this subsection and substitute the following:

Merchantable timber removed from Forest Service land is subject to the Forest Resources Conservation and Shortage Relief Act of 1990 (PL 101-382; 104 Stat. 714-726; 16 USC 620 et. seq.). Do not export timber from the United States or use in direct or indirect substitution for

unprocessed timber exported from the United States, from private lands by Purchaser, or any person as defined in Section 493 (16 USC 620e) of the Act.

Unless Forest Service determines that circumstances warrant a written waiver or adjustment, (1) hammer brand all products on both ends with an assigned contract brand before removal from the project site, (2) hammer brand each product exempt from domestic processing on both ends with an exempt brand registered for use on exempt logs from National Forest, and (3) paint all domestic processing products on both ends with 2 inch circle of yellow paint according to Interim Specification 2400-400 (available upon request). Paint or brand products before removing them from project site unless approved by the CO. Brands and yellow paint must remain on logs until they are processed.

Contractor may remanufacture logs into different log lengths as approved. Repaint or rebrand all remanufactured pieces. Pay all surveillance costs except that Forest Service may waive such payment if such costs are minor and part of normal remanufacturing operations.

201.06_nat_us_11_09_2005

201.06 Disposal

Delete the first sentence of this paragraph and substitute the following:

Limb and deck logs that meet utilization standards at locations approved by the CO or otherwise designated. Deck logs according to 201.04 (f).

201.06_nat_us_02_18_2005

201.06 Disposal.

Delete the first sentence of this subsection and substitute the following:

Dispose of merchantable timber designated for removal according to the provisions of the timber sale contract.

203 - Removal of Structures and Obstructions

203.01_nat_us_02_25_2005

203.01 Description.

Delete and replace with the following:

This work consists of disposing of construction slash and debris, salvaging, removing, and disposing of buildings, fences, structures, pavements, culverts, utilities, curbs, sidewalks, and other obstructions.

203.04_nat_us_02_18_2005

203.04 Removing Material.

Replace the fourth and fifth paragraphs with the following:

Where part of an existing culvert is removed, remove the entire culvert upstream from the removal. The remaining downstream culvert may be left in place if no portion of the culvert is within 12 inches of the subgrade, embankment slope, or new culvert or structure; and the culvert ends are sealed with concrete.

Remove structures and obstructions in the roadbed to 12 inches below subgrade elevation. Remove structures and obstructions outside the roadbed to 12 inches below finished ground or to the natural stream bottom.

203.05_nat_us_02_18_2005

203.05 Disposing of Material.

Add the following:

(e) Windrowing Construction Slash. Place construction slash outside the roadway in neat, compacted windrows approximately parallel to and along the toeline of embankment slopes. Do not permit the top of the windrows to extend above subgrade. Use construction equipment to matt down all material in a windrow to form a compact and uniform pile. Construct breaks of at least 15 feet at least every 200 feet in a windrow. Do not place windrows against trees. Obtain approval for pioneer roads. A pioneer road may be constructed to provide an area for placement of windrows, provided the excavated material is kept within the clearing limits and does not adversely affect the road construction.

(f) Scattering. Scatter construction slash outside the clearing limits without damaging trees. Limb all logs. Place logs and stumps away from trees, positioned so they will not roll, and are not on top of one another. Limb and scatter other construction slash to reduce slash concentrations.

(g) Chipping or Grinding. Use an approved chipping machine to grind slash and stumps greater than 3 inches in diameter and longer than 3 feet. Deposit chips or ground woody material on embankment slopes or outside the roadway to a loose depth less than 6 inches. Minor amounts of

chips or ground woody material may be permitted within the roadway if they are thoroughly mixed with soil and do not form a layer.

(h) Debris Mat. Use tree limbs, tops, cull logs, split stumps, wood chunks, and other debris to form a mat upon which construction equipment is operated. Place stumps upside down and blend stumps into the mat.

(i) Decking Firewood Material. Remove brush from decks. Limb and deck logs that do not meet Utilization Standards according to Subsection 201.04 as directed by the CO. Cut logs to lengths less than 30 feet. Ensure that logs stacks are stable and free of brush and soil.

(j) Removal to designated locations. Remove construction slash to designated locations.

(k) Piling. Pile construction slash in designated areas. Place and construct piles so that if the piles are burned, the burning will not damage remaining trees. Keep piles free of dirt from stumps. Cut unmerchantable logs into lengths of less than 20 feet.

(l) Placing Slash on Embankment Slopes. Place construction slash on completed embankment slopes to reduce soil erosion. Place construction slash as flat as practicable on the completed slope. Do not place slash closer than 2 feet below subgrade. Priority for use of available slash is for: (1) through fills; (2) insides of curves; and (3) ditch relief outlets.

(m) Hydrological Sensitive Placement. Where required use this method in combination with other designated methods to dispose of material to reduce erosion and to aid in re-vegetation:

1. Place windrow segments on contours, wrap in type I geotextile.
2. Place logs as log erosion barriers on contours. Place logs so that 80% of their length is on the ground surface.
3. Scatter slash on bare or disturbed areas within or outside the clearing limits as directed.
4. Scatter chips or ground woody material on bare or disturbed areas within or outside the clearing limits as directed.

Place stumps in swales or on sites to form planting pockets. Place windrow segments on contours, wrap in type I geotextile.

203.08 Payment

Add the following:

Disposal of construction slash will be compensated under the designated pay item in Section 201.

230 - Roadside Brushing

230.00_0114_us_08_04_2005

Description

230.01 Work. This work consists of removing all vegetative material including limbs, residual slash, live roadside brush, and small trees within the brushing limits designated on the plans.

Construction

230.02 Brushing. Cut all brush and small trees (6 inches diameter, or less, at the point of cut) inside the brushing limits and outside the roadbed no higher than 4 inches above ground level (6 inches for machine brushing). If rocks or other obstructions are encountered, cut no higher than 6 inches above the obstruction. Limb live trees with a diameter larger than 6 inches to provide a clear height of 14 feet above the road surface.

Cut all brush and trees located on the roadbed as nearly flush to the road surface as possible so stumps will not become a hazard to vehicle tires.

230.03 Windfalls. Limb windfalls lying within or across the brushing limits, cut off at the top of the existing cut slope or 5 feet from the shoulder on the fill slope. Dispose of windfall material as slash.

230.04 Road Junctions. Do not deposit brushing debris on the roadway of adjoining roads.

230.05 Slash Treatment. Scatter slash outside the brushing limits without damaging residual trees. Slash is defined as any material that has a length greater than 36 inches or a diameter greater than 2 inches at any point. Do not deposit material in streams, streambeds, culvert inlets or outlets, drainage ways, or cattle guards.

230.06 Acceptance. Roadside brushing will be evaluated under Subsection 106.02.

Measurement

230.07 Method. Measure the Section 230 items listed in the bid schedule according to Subsection 109.02 and the following.

Linear measurements will be horizontal along the road centerline.

Quantities will be the number of miles (or stations) and fractions thereof along the road centerline.

Payment

230.08. The accepted quantities will be paid at the contract price per unit of measurement for the section 230 pay items listed in the bid schedule. Payment will be full compensation for the work prescribed in this section. See Subsection 109.05.

301 - Untreated Aggregate Courses

301.00_nat_us_03_03_2005

301 Title Change.

Change the title to: **Section 301 Aggregate Courses**

301.01_nat_us_03_03_2005

301.01 Work.

Add the following:

Work includes producing aggregate by pit-run, grid rolling, screening, or crushing methods, or placing Government-furnished aggregate. Work may include additive mineral filler, or binder.

301.02_nat_us_05_16_2005

301.02 Material.

Add the following:

Bentonite	725.30
Calcium Chloride Flake	725.02
Lignon Sulfonate	725.20
Magnesium Chloride Brine or Calcium Chloride Liquid	725.02

301.03_nat_us_09_14_2005

301.03 General.

Add the following:

Written approval of the roadbed is required before placing aggregate.

For pit run or grid-rolled material, furnish material smaller than the maximum size. No gradation other than maximum size will be required for pit-run or grid-rolled material. For grid rolling, use all suitable material that can be reduced to maximum size. After processing on the road, remove all oversize material from the road and dispose of it as directed by the CO.

Provide additives or binder, if required, at the proportions specified.

Develop and use Government furnished sources according to Section 105.

If the aggregate is produced and stockpiled before placement, handle and stockpiled according to Section 320. Establish stockpile sites at locations approved. Clear and grub stockpile sites according to Section 201.

301.04 Mixing and Spreading.

Delete the first sentence of the first paragraph and add the following:

Ensure that aggregate and any required additives, water, mineral filler, and binder are mixed by the specified method except, if crushed aggregate products are being produced and mineral filler, binder, or additives are required, uniformly blend following crushing. Control additive proportions to 0.5 percent dry weight.

(a) Stationary Plant Method. Mix the aggregate with other required materials in an approved mixer. Add water during the mixing operation in the amount necessary to provide the moisture content for compacting to the specified density. After mixing, transport the aggregate to the jobsite while it contains the proper moisture content, and place it on the roadbed or base course using an aggregate spreader.

(b) Travel Plant Method. After placing the aggregate for each layer with an aggregate spreader or windrow-sizing device, uniformly mix it with other required materials using a traveling mixing plant. During mixing, add water to provide the necessary moisture content for compacting.

(c) Road Mix Method. After placing the aggregate for each layer, mix it with other required materials at the required moisture content until the mixture is uniform throughout. Mix aggregate, water, and all other materials until a uniform distribution is obtained.

Spread the aggregate in a uniform layer, with no segregation of size, and to a loose depth that will provide the required compacted thickness.

When placing aggregate over geotextile, place aggregate in a single lift to the full depth specified.

Route and distribute hauling and leveling equipment over the width and length of each layer.

301.05 Compacting

Delete and replace with the following:

Compact each layer full width. Roll from the sides to the center, parallel to the centerline of the road. Along curbs, headers, walls, and all places not accessible to the roller, compact the material with approved tampers or compactors.

Compact the aggregate using one of the following methods as specified:

Compaction A. Operating spreading and hauling equipment over the full width of the travelway.

Compaction B. Operate rollers and compact as specified in Subsection 204.11(a)(1).

Compaction C. Moisten or dry the aggregate to a uniform moisture content between 5 and 7 percent based on total dry weight of the mixture. Operate rollers and compact as specified in Subsection 204.11(a)(1).

Compaction D. Compact to a density of at least 95 percent of the maximum density, as determined by AASHTO T 99, method C or D.

Compaction E. Compact to a density of at least 96 percent of the maximum density, as determined by the Modified Marshall Hammer Compaction Method (available upon request from USDA Forest Service, Regional Materials Engineering Center, P.O. Box 7669, Missoula, MT 59807).

Compaction F. Compact to a density of at least 95 per-cent of the maximum density, as determined by AASHTO T 180, method C or D.

Compaction G. Compact to a density of at least 100 percent of the maximum density as determined by the Modified Marshall Hammer Compaction Method (available upon request from USDA Forest Service, Regional Materials Engineering Center, P.O. Box 7669, Missoula, MT 59807).

For all compaction methods, blade the surface of each layer during the compaction operations to remove irregularities and produce a smooth, even surface. When a density requirement is specified, determine the in place density and moisture content according to AASHTO T 310 or other approved test procedures.

301.06_nat_us_03_03_2005

301.06 Surface Tolerance.

Add the following:

Thickness and Width requirements:

The maximum variation from the compacted specified thickness is ½ inch. The compacted thickness is not consistently above or below the specified thickness and the average thickness of 4 random measurements for any ½ mile of road segment is within + ¼ inch of the specified thickness.

The maximum variation from the specified width will not exceed +12 inches at any point. The compacted width is not consistently above the specified width and the average of any four random measurements along any ½ mile of road segment is within +4 inches of the specified width.

Table 301-1: Add the following:

Table 301-1—Acceptance Sampling and Testing Requirements.

Material or Product	Type of Acceptance (Subsection)	Characteristic	Category	Test Methods Specifications	Sampling Frequency	Point of Sampling	Split Sample	Reporting Time
Subbase & Base Courses L, M, N, O, P, Q, R	Measured and tested conformance (Subsection 106.04)	Plastic Limit	-	AASHTO T 90	1 per each 1,000 T	From the windrow or roadbed after processing	Yes	4 Hours

Table 301-1—Acceptance Sampling and Testing Requirements.

Material or Product	Type of Acceptance (Subsection)	Characteristic	Category	Test Methods Specifications	Sampling Frequency	Point of Sampling	Split Sample	Reporting Time
Aggregate Width	Measured and tested conformance (Subsection 106.04)	Width	-	-	4 per each 0.5 mi	Roadbed after processing	-	4 Hours
Aggregate Thickness	Measured and tested conformance (Subsection 106.04)	Thickness	-	-	4 per each 0.5 mi	Roadbed after processing	-	4 Hours
Additive	Measured and tested conformance (Subsection 106.04)	Amount of Additive	-		1 per each 1,000 T	From the windrow or roadbed after processing	No	4 Hours

301.08(b) Plasticity Index.

Add the following to the first sentence:

"and under 703.05(c)(1)".

Table 301-1 Field Density Requirements.

Table 301-1: Delete laboratory and field density requirements for base, subbase, and surfacing and replace with the following:

Material or Product	Type of Acceptance (Subsection)	Characteristic	Category	Test Methods Specifications	Sampling Frequency	Point of Sampling	Split Sample	Reporting Time
Base and Subbase	Measured and tested conformance (Subsection 106.04)	Moisture Density	---					
		Method C	---	AASHTO T 99	1 per type and source of material	Source of material	Yes	Before using in work
			---		"	"	"	"
		Method D	---	AASHTO T 180	"	"	"	"
			---		"	"	"	"
		Compaction	---					
		Method C, D	---	AASHTO T 310 or other approved procedures	1 per 500 t	In-place	---	Before placing the next layer
Surfacing	Measured and tested conformance (Subsection 106.04)	Moisture Density						
			---		"	"	"	Before using in work
		Method D	---	AASHTO T 180	"	"	"	"
			---		"	"	"	"
		Compaction						
		Method C, D	---	AASHTO T 310 or other approved procedures	1 per 500 t	In-place	---	Before placing the next layer

301.09 Measurement.

Replace the second paragraph with the following:

Measure aggregate by cubic yard compacted in place when payment is by contract quantities.

301.10 Payment

Delete the following:

adjusted according to Subsection 106.05

303 – Road Reconditioning

Delete Section 303 in its entirety and replace with the following.

Description

303.01 This work consists of reconditioning ditches, shoulders, roadbeds, parking areas, approach road intersections and aggregate surfaces. Clean and maintain all drainage structures.

Material

Construction Requirements

303.03 Ditch Reconditioning. Remove all slide material, sediment, vegetation, and other debris from the existing ditches and culvert inlets and outlets. Reshape ditches and culvert inlets and outlets to achieve positive drainage and a uniform ditch width, depth, and grade. Dispose of waste in designated waste areas located in the field.

303.04 Shoulder Reconditioning. Repair soft and unstable areas according to Subsection 204.07. Remove all slide material, vegetation, and other debris from existing shoulders including shoulders of parking areas, turnouts, and other widened areas. Dispose of waste as located in the field.

303.05 Roadbed Reconditioning Repair soft and unstable areas according to Subsection 204.07. Remove all organic, deleterious material larger than 6 inches from the top 6 inches of subgrade. Dispose of waste as located in the field. Scarify and shape the traveled way and shoulders at locations and to the depth and width designated on the plans. Remove surface irregularities and shape to provide a uniform surface.

Dispose of rock larger than 4 inches brought to the surface during scarification in areas located in the field.

For portions of roads not requiring scarification, the roadbed may contain rocks larger than 4 inches provided they do not extend above the finished roadbed surface. Reduce in place or remove rock extending above the finished roadbed surface. Dispose of removed rock in areas located in the field.

Compact using the following method as specified:

(a) Layer Placement Method (Hauling and Spreading Equipment). Place material by end dumping to the minimum depth needed for operation of spreading equipment. Level and smooth each embankment layer before placing the next layers. Operate hauling and spreading equipment uniformly over the full width of each layer. Construct a solid embankment with adequate compaction by working smaller rock and fines in with the larger rocks to fill the voids, and by operating hauling and spreading equipment uniformly over the full width of each layer as the embankment is constructed.

(b) Layer Placement (Roller Compaction) Method. Place material by end dumping to the minimum depth needed for operation of spreading equipment. Adjust the moisture content of the material to obtain a mass that will not visibly deflect under the load of the hauling and spreading equipment. Operate compaction equipment over the full width of each layer until visible deformation of the layer ceases or, in when a sheepsfoot roller is used, the roller "walks out" of the layer. Make at least three complete passes. . Use rollers that meet the following requirements:

(1) Steel wheeled rollers, other than vibratory, capable of exerting a force of not less than 250 pounds per inch of width of the compression roll or rolls.

(2) Vibratory steel wheeled rollers equipped with amplitude and frequency controls with a minimum weight of 6 tons, specifically designed to compact the material on which it is used.

(3) Pneumatic-tired rollers with smooth tread tires of equal size that will provide a uniform compacting pressure for the full width of the roller and capable of exerting a ground pressure of at least 80 psi.

303.06 Aggregate Surface Reconditioning. Repair soft and unstable areas to the full depth of the aggregate surface and according to Subsection 204.07. Scarify to the depth and width shown on the plans, and remove surface irregularities. Reshape, finish, and compact the entire aggregate surface according to Section 301, Section 308, Section 321, or Section 322 as applicable.

303.07 Roadway Reconditioning. Perform all the applicable work described in Subsections 303.03 through 303.06.

Maintain the existing cross slope or crown unless otherwise shown on the plans. Establish a blading pattern that will retain the surfacing on the roadbed and provide a through mixing of the materials within the completed surface width.

Blade and shape the subgrade for both surfaced and unsurfaced roads when moisture content is suitable for compaction.

303.09 Acceptance. Road reconditioning work will be evaluated under Subsections 106.02 and 106.04.

Measurement

303.10 Measure the Section 303 items listed in the Schedule of Items according to Subsection 109.02 and the following as applicable.

Measure ditch reconditioning and shoulder reconditioning by the mile, by the station or foot horizontally along the centerline of the roadway for each side of the roadway.

Measure roadbed reconditioning, aggregate surface reconditioning, roadway reconditioning, and pulverizing by the mile, by the station, or by the square yard.

Payment

303.11 The accepted quantities will be paid at the contract price per unit of measurement for the Section 303 pay items listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

602.03 General.

Add the following:

Ensure that the final installed alignment of all pipe allows no reverse grades, and does not permit horizontal and vertical alignments to vary from a straight line drawn from center of inlet to center of outlet by more than 2 percent of pipe center length or 1.0 feet, whichever is less.

625 - Turf Establishment

625.03 General.

Delete this subsection and replace with the following:

Apply turf establishment to prepared ground or any disturbed area between April 15th and September 30th. Apply turf establishment to the areas shown on the plans or worklists within 7 days after completion of ground disturbing activities. Unless otherwise specified in writing by the CO apply turf establishment after each 1000 foot section of road has been constructed to template lines. Seeded areas damaged by construction activities shall be reseeded within 10 days of the damage. Do not seed during windy weather or when the ground is excessively wet, frozen, or snow covered.

Assure that all seed and mulch used in the work conforms to the weed free requirements of Section 713.

625.04 Preparing Seedbed.

Delete entire subsection and replace with the following:

Ensure that the surface soil is in a roughened condition favorable for germination and growth.

625.05 Watering

Delete entire subsection.

625.06 Fertilizing.

Delete entire subsection and replace with the following:

Apply fertilizer having a chemical analysis as listed below by the following methods.

(a) Dry Method. Apply the fertilizer with approved mechanical equipment. Hand operated methods are satisfactory on areas inaccessible to mechanical equipment.

(b) Hydraulic method. Use hydraulic-type equipment capable of providing a uniform application using water as the carrying agent. Add fertilizer to the slurry and mix before adding seed. Add the tracer material when designated by the CO.

Fertilizer. Apply fertilizer at the rate of 500 pounds per acre. Insure that the fertilizer meets the following chemical analysis:

Nutrient	Percent
Nitrogen, N	*10*
Phosphorus, P_2O_5	*20*
Potassium, K	*20*

625.07 Seeding.

Delete the first sentence and add the following.

Apply seed mix by the following methods:

(a) Dry method. Delete the third sentence.

Add the following after subsection (b).

Seed Mix. Furnish and apply the following kinds and amounts of pure live seed

April thru July plant spring oats 30 lbs/acre

August thru October winter rye 30 lbs/acre

625.08 Mulching.

Delete the entire subsection and replace with the following:

Apply Mulch within 24 hours after seeding by the following methods.

(a) Dry Method. Apply mulch with a hand spreader or a spreader utilizing forced air at a rate of ***4000*** pounds per acre. Anchor the mulch with an approved stabilizing emulsion tackifier at a rate of ***0*** gallons per acre. Do not mark or deface structure, pavements, utilities, or plant growth with tackifier.

(b) Hydraulic Method. Apply mulch in a separate application from the seed using hydraulic-type equipment according to Subsection 625.07(b).

Apply wood fiber or grass straw cellulose fiber mulch at a rate of *775* pounds per acre.

Apply bonded fiber matrix hydraulic mulch at a minimum rate of *775* pounds per acre. Apply so no hole in the matrix is greater than 0.04 inches. Apply so that no gaps exist between the matrix and the soil.

Inaccessible areas may be mulched by hand. Apply mulch uniformly over the entire disturbed area.

625.09 Protecting and Caring for Seeded Areas

Delete the first sentence and add the following:

Protect and care for seeded areas until final acceptance.

625.11 Measurement.

Delete the entire Subsection and replace with the following:

Measure the Section 625 items listed in the bid schedule according to Subsection 109.02.

633.02_nat_us_03_03_2005

633.02 Material.

Add the following subsections

Protective Overlay Film	718.02
Edge Film	718.02

633.03_nat_us_03_03_2005

633.03 General.

Delete the subsection and add the following:

Furnish traffic control devices and guide signs according to the MUTCD, approved USDA-FS and state supplements, the current edition of USDA-FS EM-7100-15 Sign and Poster Guidelines for the Forest Service, and Standard Highway Signs published by FHWA. Submit the sign list for approval before ordering.

633.05_nat_us_03_03_2005

633.05 Panels.

Add the following:

Apply protective overlay film and top edge film as required and according to with manufacturer's recommendations.

Delete the sentence: "Use antitheft fasteners where possible" in the fifth paragraph and replace it with the following: "For each sign panel use at least one antitheft fastener."

650 - Road Closure Devices

650.00_nat_us_06_28_2007

Description

650.01 Work. Furnish and install, or install only, road closure devices using fabricated gates and accessories, combination post and rail barriers, concrete barriers, earth mound barriers, and other devices.

Materials

650.02 Requirements. Furnish materials to be used in fabricating gates and barriers. Ensure that all hardware is galvanized in accordance with AASHTO M 232 and meets the requirements of ASTM A 307. Furnish plain or cut washers that are American Standard Washers.

Furnish timber posts, rails, and lumber that meets the requirements of AASHTO M 168. Provide timber of the species and type, and rate of preservative treatment.

Furnish concrete that meets the requirements of Subsection 601.03, method B or C.

Construct earth mound barriers from excavated material adjacent to the barrier location, or from other designated locations.

Construction

650.03 Performance. Place road closure devices at designated locations. Construct all devices to the required dimensions. In assembling gates, perform required welding in accordance with the best modern practice and the applicable requirements of AWS D1.1.

After assembly, clean non-galvanized steel pipe gates and paint them with one coat of zinc-rich primer and two coats of exterior enamel of the required type and color.

Set all posts vertically and embed them to the required depth. Place concrete for embedment against undisturbed earth within an excavation sized to achieve the embedment dimensions. Compact the backfill in 6 inch layers to finished grade.

Furnish and install all signs and/or reflective warning markers accessory to the road closure device.

650.04 Acceptance. Construction of road closure devices will be evaluated under Subsections 106.02 and 106.04.

Measurement

650.05 Measure the items listed in the bid schedule according to Subsection 109.02.

Payment

650.06 The accepted quantities, measured as provided in Subsection 109.02 and above, will be paid at the contract price per unit of measurement for the Section 650 pay item listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

651 - Development of Pits & Quarries

Description

651.01 This work consists of clearing, grubbing, stripping topsoil, removing overburden, constructing access roads, conducting restoration activities, and performing other incidental work required for pit or quarry development.

Construction Requirements

651.02 General. Submit a plan of operations according to Section 105. Perform all work in accordance with Sections 105, 201, 203, 204, 625, and 635, landscape preservation requirements, and the approved pit and quarry development plan of operations. Perform the work in accordance with MSHA 30 CFR, part 56.

651.03 Acceptance. Developing pits and quarries will be evaluated under Subsections 106.02 and 106.04.

Measurement

651.04 Measure the Section 651 items listed in the bid schedule according to Subsection 109.02.

Payment

651.05 The accepted quantities will be paid at the contract price per unit of measurement for the Section 651 pay items listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

SPS 703 AGGREGATE

Add the following: **703.20 Driving Surface Aggregate.** All Driving Surface Aggregate (DSA) is to be derived from natural limestone formations. Stone is defined as rock that has been crushed; rock is defined as consolidated mineral material. For use in this program, both are restricted to that which has been mined or quarried from existing bedrock formations.

All components of the aggregate mix are to be derived from crushed parent rock material that meets program specifications for abrasion resistance, pH and freedom from contaminants. Ninety-eight percent (98%) of the fines passing the #200 sieve must be parent rock material. No clay or silt soil may be added. The amount of particles passing the #200 sieve shall be determined using the washing procedures specified in PTM No. 100.

Size: The required amount and allowed ranges, determined by weight, for various size particles are:

PASSING SIEVE	LOWER%	HIGH%
1 ½ inch	100%	
¾ inch	65%	90%
#4	30%	65%
#16	15%	30%
#200	10%	20%

LA Abrasion: The acceptable limit is measured by weight loss is "less than 40% loss". Los Angeles Abrasion test, AASHTO T-96 (ASTM C 131) shall be used to determine this property. Existing tests made for and approved by PennDOT will be accepted.

Sulfate Test: Soundness or resistance to freeze/thaw (i.e. sulfate test) is not specified for this application because a gravel road driving surface aggregate is not bound within a concrete or asphalt mix.

pH: Aggregate must be within the range of pH 6 to pH 9 as measured by EPA 9045C.

Optimum Moisture: Material is to be delivered and placed at optimum moisture content as determined for the particular source. The optimum percentage moisture is to be identified by the supplier in the bid purchasing documents. Loads with excessive moisture shall be rejected. Water draining from the tailgate, excess material sticking to the roller drum or the inability to compact the material are field indicators of excess moisture. In addition, if a load is too dry or does not have enough fines it will be rejected. Visual inspection of the load and poorly consolidated material after compactive effort are field indicators of low moisture or poor product gradation.

Transport: Tarps are to be used to cover 100% of the load's exposed surface from the time of loading until immediately before dumping. This requirement includes standing time waiting to dump.

Aggregate producers are required by the program to certify that the aggregate they deliver conforms to the program specifications. To eliminate segregation of material, stockpiling of material at jobsite will not be permitted unless authorized by COR.

The following are "Local" sources for this material:

Hawbaker - Turtlepoint, PA. 814-237-1444 or 814-642-2500

New Enterprise Stone & Lime Co. Tyrone, PA 814-695-4405

Road Preparation Specifications: The road surface to receive the aggregate should have template with crown of 2% or $\frac{1}{4}$ inch per foot. The receiving surface is to be scarified to permit knitting of the aggregate.

Driving Surface Aggregate Placement: Minimum compacted depth of four inches is to be established for driving surface. Driving Surface Aggregate is to be applied by tailgate spreading unless spreader box is specified. Material when placed shall be compacted as follows: Beginning on the lower or berm side of the crown, begin rolling and work your way to the top of the crown by overlapping the successive longitudinal passes. Do not run the roller lengthwise directly on the crown. Compaction with truck tires is not accepted. Steel wheel rollers other than vibratory shall be capable of exerting a force of not less than 250 pounds per inch of width of the compression roller or rollers. Rollers shall be self propelled with a minimum weight of 6 tons. Contractor must have certification in writing that material placed is Driving Surface Aggregate meeting this specification.

1" Minus Aggregate (DSA Gravel non limestone) Size: The required amount and allowed ranges, determined by weight, for various size particles are:

PASSING SIEVE	LOWER%	HIGH%	
1 $\frac{1}{2}$ inch	100%		
$\frac{3}{4}$ inch	65%	95%	
#4	30%	65%	LA Abrasion < 40%
#16	15%	30%	Sulfate Test - Not Applicable
#200	10%	15%	PH between 6 and 9

Material available at Glenn O. Hawbacker - Pittsfield Pit 814-563-7911

Pennsylvania 2A Gradation:

The required amount and allowed ranges, determined by weight, for various size particles are:

PASSING SIEVE	LOWER%	HIGH%	
2 inch	100%		
$\frac{3}{4}$ inch	52%	100%	
#4	24%	50%	LA Abrasion < 40%
#16	10%	30%	Sulfate Test - Not Applicable
#200	0%	10%	PH between 6 and 9

AASHTO 57 Gradation:

The required amount and allowed ranges, determined by weight, for various size particles are:

PASSING SIEVE	LOWER%	HIGH%
1-1/2 inch	100%	
1 inch	95%	100%
1/2 inch	25%	60%
#4	0%	10%
#8	0%	5%

SPS 705 - Rock

Replace 705.02 with the following:

705.02 **Riprap Rock.** Furnish rock sound, free from structural defects and foreign substances such as soil, shale, and organic materials. Use rock conforming to the following requirements:

No shale seams

Hard and angular shaped rock with neither width nor thickness less than one-third its length.

Minimum specific gravity of 2.5 as determined according to AASHTO T 85, bulk saturated, but surface-dry basis.

Each load of rock well-graded, from smallest to the largest size

	Percent Passing (Square Openings)				
Class, Size No.	R-7	R-6	R-5	R-4	R-3
Rock Size (inches)					
30	100				
24		100			
18	15-50		100		
12	0-15	15-50		100	
9			15-50		
6		0-15		15-50	100
4			0-15		
3				0-15	15-50
2					0-15
Nominal Thickness	36	30	24	18	12

718.05 Aluminum Panels

Delete the third paragraph and replace with the following:

Clean, degrease and properly prepare the panels according to methods recommended by the sheeting manufacturer. Conversion coatings will conform to ASTM B-921 or ASTM B-449.